CALIFORNIA
OIL WORLD
19

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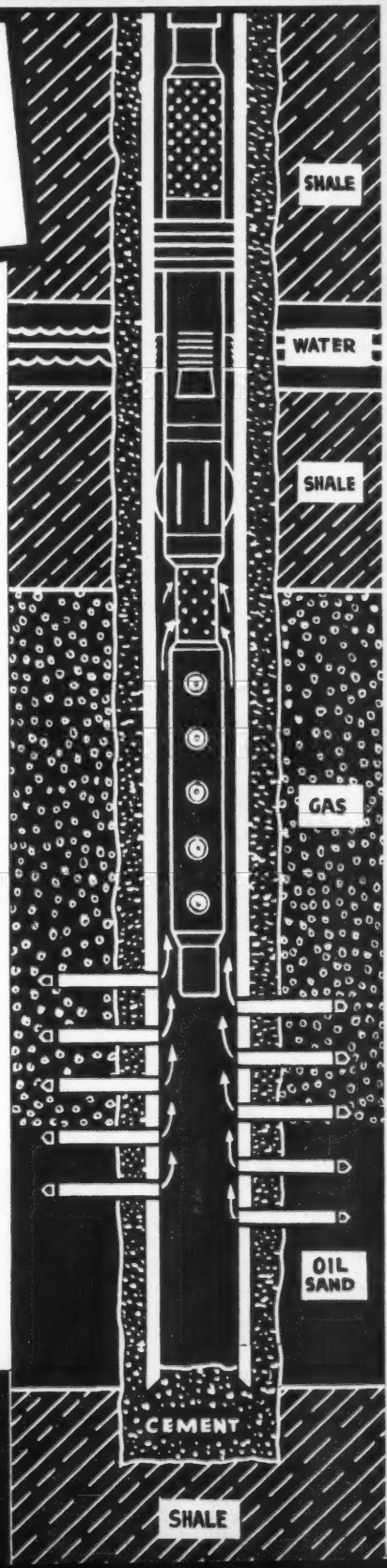

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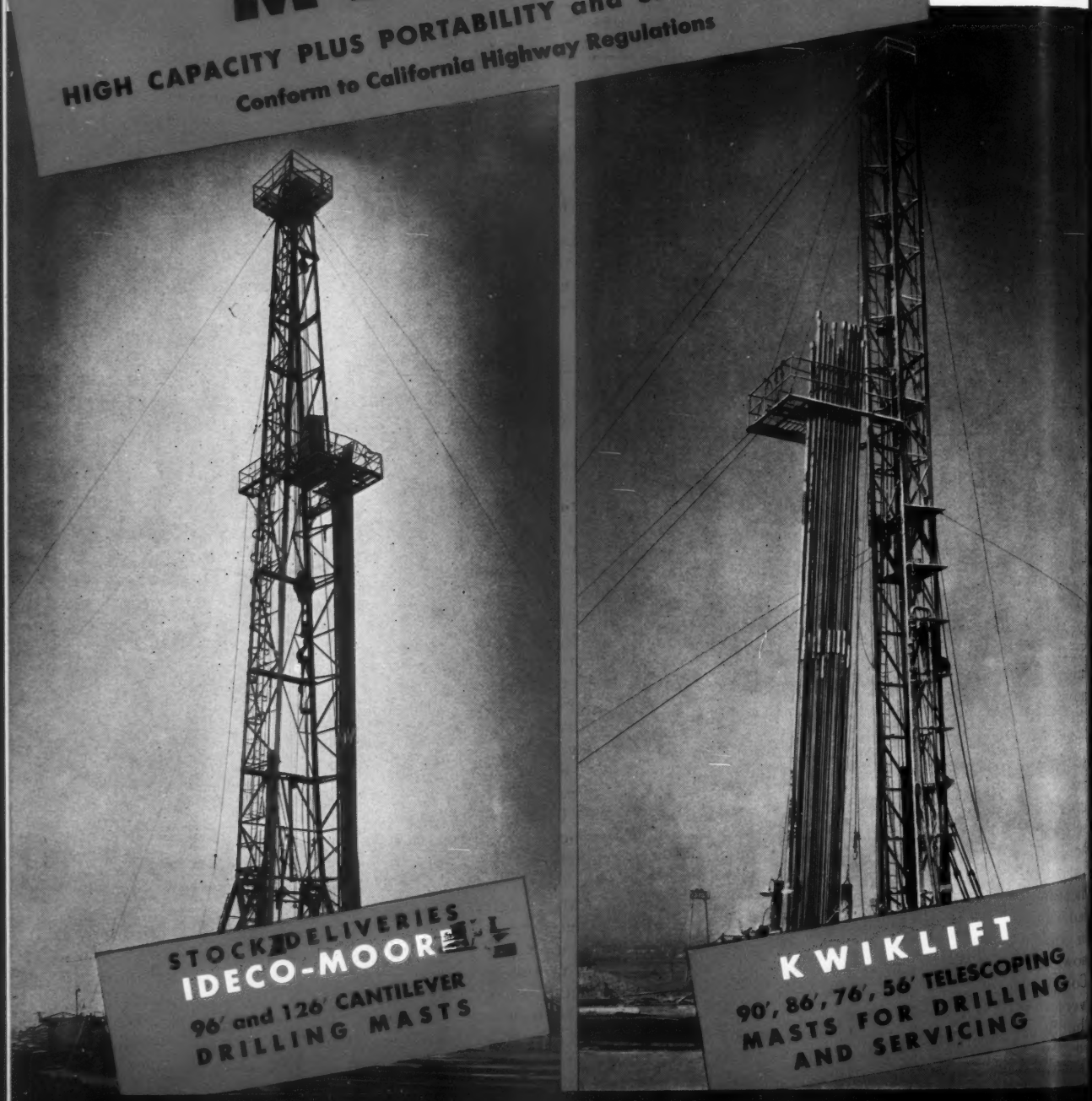

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CALIFORNIA
OIL WORLD

PUBLISHED TWICE A MONTH
FOR TIMELY, COMPLETE
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September 28th, 1944
Telephone Number TUcker 2571

Carrington Kung

The September meeting of the Petroleum Industry War Council probably rates top-billing in the scanty trickle of oil news coming out of Washington in pre-election weeks.

Outburst of George A. Hill, Houston Oil Co. president, received the most attention, because of Hill's attack on Congress and the constitutionality of the recently signed—but not yet executed—International Petroleum Agreement.

"The device of treaty-making in the case of the Petroleum Agreement now pending before the U. S. Senate is being used as a legal expedient for the creation of a federal power in the Congress of the United States or an International Oil commission over and in excess of the powers delegated to Congress under the Constitution," Hill declaimed.

This outrage can be "lawfully and successfully achieved by merely predicating this new body of Congressional powers on the treaty itself as the supreme law of the land," he insisted.

Hill's charges—including the prediction that a "species of lawful federal control of the oil business, in various aspects and phases not now existent" would come under Congressional control if the treaty were ratified by a two-thirds vote of the Senate—met with a mixed reception from PIWC members.

Some oil men are inclined to the theory there isn't much percentage in worrying about the so-called treaty, anyhow,—at least until after the November elections . . . In the event of a Republican victory it will undoubtedly be scrapped, they explain. If the present administration remains in power, the agreement may squeak through if a real fight is put up to shove the Anglo-American oil pact through.

Other oil men point out that Hill's statement is overly pessimistic and that he is "belaboring a legal point," in viewing with alarm the potential threat of Senate domination of the oil business and what Hill called "any matters that might become the subject matter of international negotiation."

This faction is inclined to take the Hill statement with a grain of salt and with the idea his grievances against the agreement can be met without throwing everything overboard. They point out that, after all, the oil industry itself—through Orville Harden's Foreign Operations Committee—was the first to submit a report on U. S.-British oil relations and they believe the industry should not reject a proposal for which it was primarily responsible.

Hill, in his blast at the agreement, foresaw the proposed treaty assuming Federal power to fix prices "for petroleum supplies to the nationals of all peaceable countries and on a nondiscriminatory basis which embraces the assumed power of price fixing." He saw it leading to a "delicate and dangerous adventure in diplomacy" because of its power to "determine from time to time what country is 'peaceable' and what countries are 'not peaceable'."

"The proposed treaty is the design for the progressive germination of cartels under Government blessing," said Hill. "A reconsideration of this treaty may have provoked the letter of the President, dated September 8th, to Secretary of State Hull calling for a curb on cartels and in which letter it was stated that a cartel is defined by economists as a system of controlling prices, production and of allocating markets by agreements. The implications with respect to the cartelization of the oil industry cannot be escaped."

Under the treaty, legislation "undoubtedly" would be necessary at times to "fix prices . . . or to compel production or sale of oil," Hill charged. Also necessary would be legislation requiring companies with foreign concessions to pay greater royalties to foreign governments than required by terms of the concessions; the setting up of machinery to determine whether a nation is, or is not, "peaceable," in order to be entitled to purchase oil, and for the settlement of other foreign oil problems.

The agreement, Hill said, would require repeal of the General Leasing Act,—thus placing the United States under obligation to grant any alien applicant the same lease and prospecting permit as would be granted to a citizen of the United States.

"It is evident," the oil executive declared, "that much of the foregoing legislation could find no sup-

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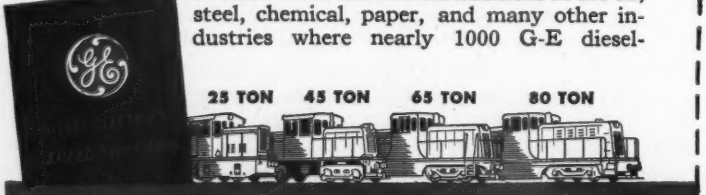

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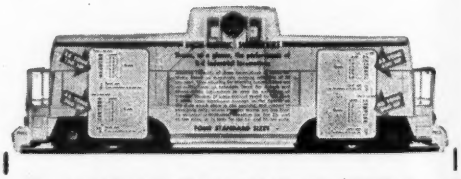

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port in the powers delegated to Congress by the Constitution. This does not mean, however, that the Government is unable to carry out the obligations envisaged in the proposed oil compact, but merely indicates that the compact must be cast in the form of a treaty in order that the legislation may have a basis recognized by the courts as valid."

* * *

Although the Anglo-American petroleum agreement is temporarily on the shelf with a lot of other unfinished business that will be left until after Nov. 7, the U. S. is quietly consulting with British petroleum experts on the very important subject of what is going to happen to the oil industry when V-E Day comes.

Due in Washington as this is being written, is a special delegation of British technicians who will sit down with their American colleagues to make what has been described as a "survey of world-wide supply."

"Personalities comprising the new British mission have not been announced. Their visit in Washington probably will not be generally publicized and they will work quietly with American oil men (largely with the foreign division of PAW) whose business it is to try to figure out immediate postwar problems, such as the disposal of stocks abroad, the needs of the liberated countries of Europe and other posers that must be considered by the Allies as soon as Germany collapses.

* * *

Good news to those who have been complaining of Washington's bureaucratic set-up; the cost to the taxpayers of maintaining such set-ups, and the general tendency to expand the Government agencies whenever possible!

According to Deputy Petroleum Administrator Ralph K. Davies, the Petroleum Administration for War is one agency that is "shrinking right along."

PAW, since the first of the year, has reduced its personnel by 15%, Davies told CALIFORNIA OIL WORLD, and—further—it has "under-expended" its budget by about $700,000.

. . . This brings up once more the question of who will be on hand, as a steadying influence, to the industry in the months immediately following peace in Europe.

With surplus property disposal a major problem the industry must face, what will the Government do with the oil properties, the pipelines, the refineries, the oil in tanks and other left-overs from an expanded production program?

Assuming PAW is dissolved before these questions are settled, some oil men fear the Government might be tempted to sell the surplus oil, now stored in tanks, for military use, at prices that might well upset the industry's price structure. Other properties might be disposed of in haste and without too much foresight,—if other agencies of the Government are left to deal with the problem and PAW is no more.

Since PAW — even though it is gradually fading from the Washington scene—still retains an able staff of trained and experienced oil men, the industry might be well-advised to sponsor its retention as counselor in any Government plans that may have to do with surplus property disposal. The fact that the War Surplus Disposal Bill, now under consideration by Congress, provides for an administrator to delegate just such responsibilities, "leaves the door open" for exactly such a suggestion, it has been noted.

* * *

Oil men throughout the country had better brace themselves against an agressive drive by the CIO to organize workers in the oil industry. The touchy situation that developed in Texas, when a CIO union wanted the Humble Oil Co. to incorporate a maintenance of membership clause in its contract with the labor organization is expected to repeat itself in other parts of the country.

When the National War Labor Board upheld the union's position, Humble balked. The company entered suit in Dallas, enjoining the Government from seizing the refinery involved,—thus paving the way for an interesting "test case."

Meanwhile, PAW—which so far has managed to keep its fingers out of the buzz-saw of labor trouble—sustained a nasty shock. Humble's suit, it is understood, mentioned Deputy Administrator Davies as a "conspirator" and charged that PAW was ready to take over the plant and that the Government oil agency already had dispatched a representative to Texas on that mission.

Regarding the charges of "conspiracy," we can only say that the legal fraternity uses the term in an entirely different manner from that which the layman (particularly the press) might employ. At this late hour—and we are trying to take care of the deadline for CALIFORNIA OIL WORLD which must rely on communications facilities seriously hampered since the start of the war—we have been unable to contact Davies.

The Department of Justice, we understand, has been given a complete explanation by Davies, and this explanation will show that the Deputy Administrator neither "conspires" against Humble Oil Co. nor is whetting an axe against the company. A man has been sent to Texas, but his duties are merely to "explore problems" posed by the labor dispute. Furthermore, PAW has no intention of getting mixed up in the row. The oil agency is aware, however, that a Presidential order to take over the plant could not well be ignored,—it is simply keeping its fingers crossed and hoping it can stay on good terms with all concerned.

* * *

Still another Californian left PAW since our last issue.

Adolph H. Levy, liaison between Congress and PAW, left Washington to resume his Los Angeles job with Levy and Levy,—a private law firm comprising his brother and himself.

Veteran of approximately 100 Congressional hearings, "Ady" Levy probably was as happy as most Californians to shake the dust and rain and humidity of Washington from his shoes. His was a thankless job, but there will be many a Washingtonian who will remember the smiling Angeleno with gratitude for his unfailing courtesies and the many "lifts" given the inquiring public during his 2½-year stay in Washington.

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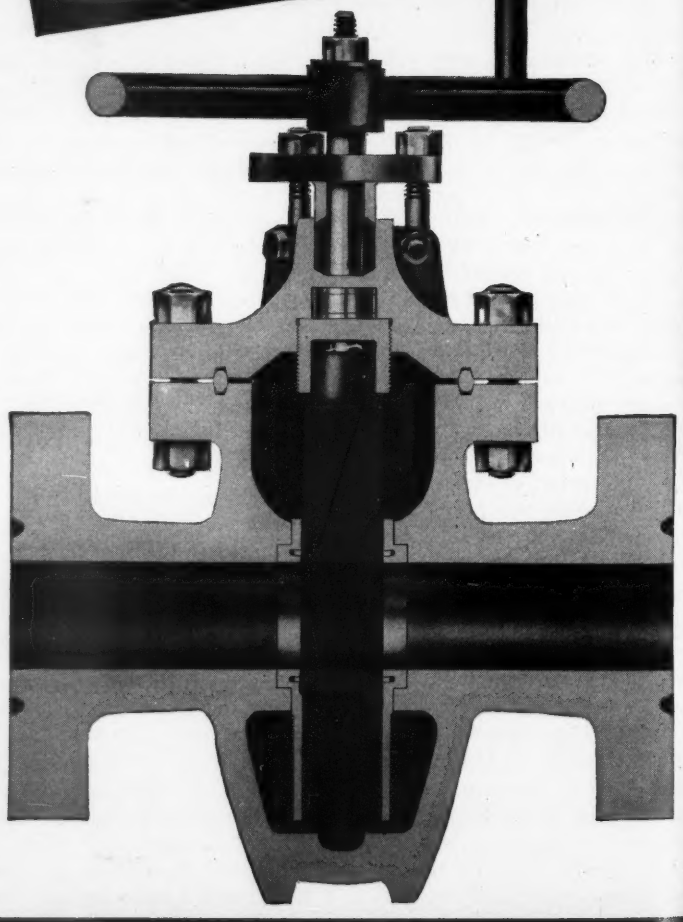

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After reaching open or closed position, a slight movement of the handwheel expands this split gate outwardly against the oversize seats forming a perfect seal on both sides. Then, the first opposite movement of the wheel collapses the gate, away from the seats, sufficiently to allow the valve to be opened or closed without effort—against full rated pressure.

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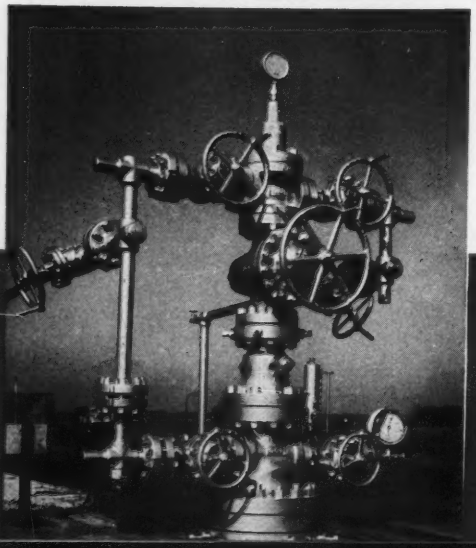

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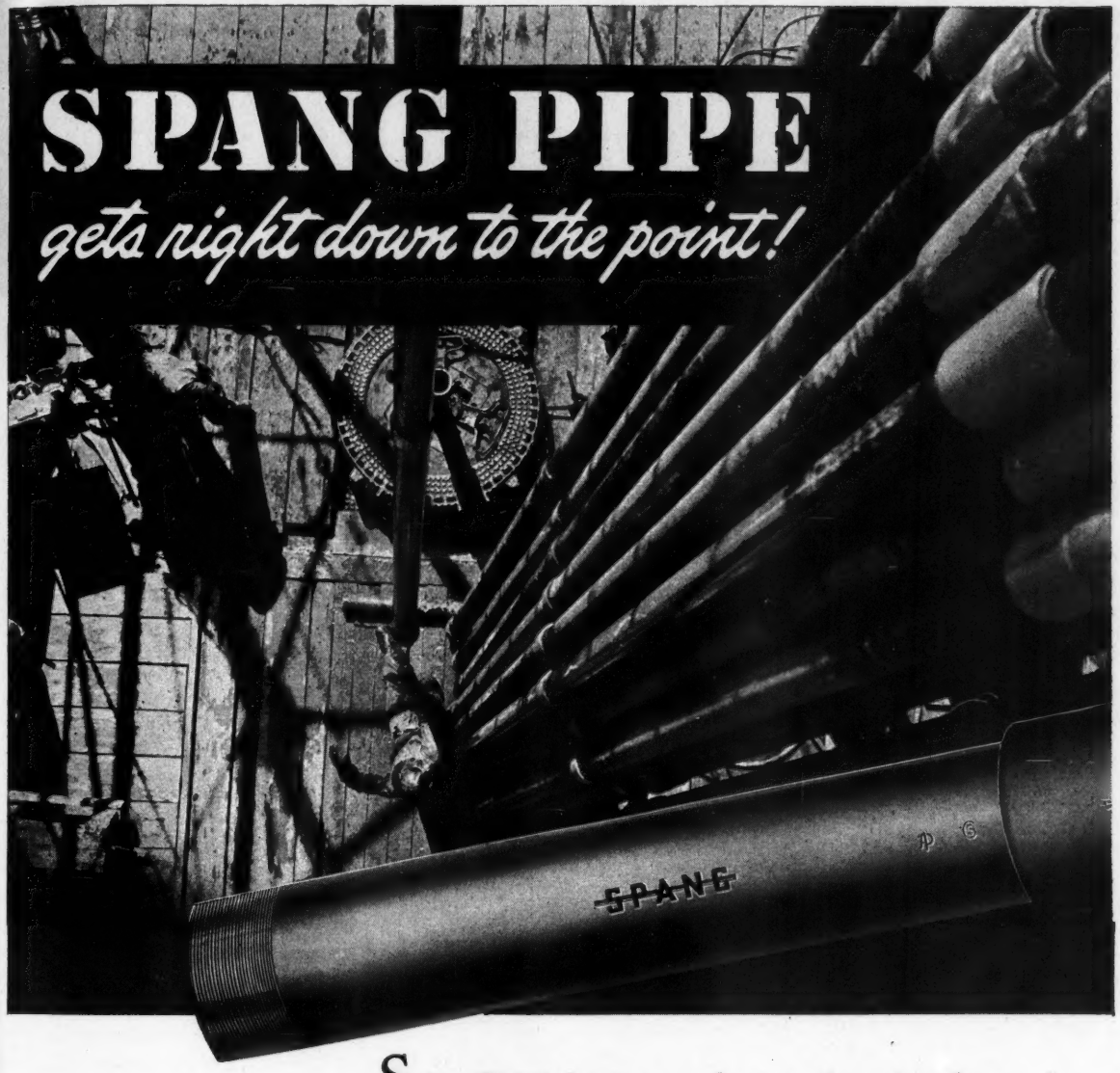

Spang Pipe helps you get down to the point where there's oil . . . *in a hurry* . . . whether it's one, two, three or more miles!

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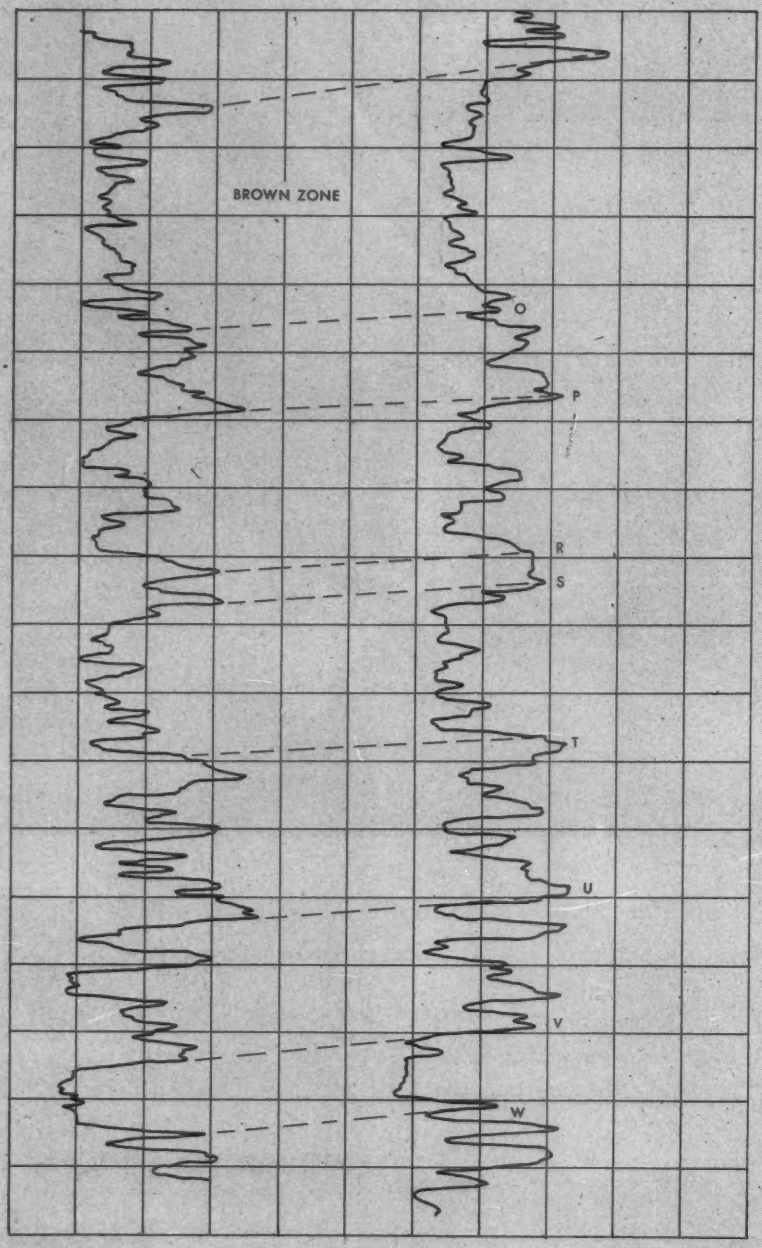
Figure 1

Correlation between Gamma Ray logs on two Signal Hill wells of Company "A."



The value of Radioactivity Logging in locating cased-off potential producing zones in old wells is here discussed. Radioactivity Logging not only indicates where the pipe should be perforated to obtain maximum production but also shows whether the expected zone is present or not. Frequently it locates potential zones that are not even suspected.

By CHARLES THOMAS MAXWELL

Increasing production from an old well by opening new saturated formation to the bore is certainly good economics. Such additional production is generally obtained by gun perforating upper cased-off productive zones that may or may not have been known or suspected to exist; but greater attention should frequently be given to the actively producing zone to make sure that the entire thickness is open to the well. In either case the potential production lies behind pipe, which is usually cemented, and when dependable records are not available, any formational data that will locate the upper and lower limits of the productive zone must be secured through the casing or liner and any cement or other material that may encase the pipe. Many wells were drilled before electrical logs were available and many wells drilled since have not been electrically logged. In such cases the unknown possibilities of production can be determined successfully only by Radioactivity Logging. Even in

RADIOACTIVITY ECONOMICS

wells that have been electrically logged it is frequently necessary to check with Radioactivity Logging to determine productive limits with sufficient accuracy to secure the desired production.

Familiar Service

The oil industry is now so familiar with Radioactivity Well Logging and how the logs are taken that little need be said about this service. Briefly, Radioactivity Logging[1] provides a means of logging through casing by running a highly sensitive detector into the well on a conductor cable to measure either the natural gamma-ray intensity of the formation or the effect of the bombardment on the formation of a strong source of neutrons. A record of the measurements is made automatically at the surface as the instrument moves up or down the well and provides a gamma-ray or neutron curve, according to which instrument is being used. The neutron curve is generally employed as a companion curve to the gamma-ray curve and will frequently aid in determining the character of the formation behind the pipe. Although the surface equipment is the same for the operation of both instruments, the gamma-ray and neutron detectors are run separately.

Many old wells, upon running a Radioactivity Log, have been found to have been producing from only a part of a productive zone. It becomes apparent then that the economic value of a Radioactivity Log can be applied to the zone in production as well as to new production zones above. As an example, assume that Well X had the liner set with the top of the perforations at the center of the productive zone. Now consider the surrounding wells as having their liners set to the top of the zone. Well X will never produce as much oil as the surrounding wells although it has equal potentialities. If water encroaches, Well X will have a higher water cut and will be the first well to go completely wet. By running a Radioactivity Log in Well X this condition will be discovered and formational data provided by means of which the casing can be perforated to the top of the zone. The well will then be producing from the same zone thickness as those surrounding it and this well may produce thousands of barrels of oil which would never have been possible had the Radioactivity Log not been run.

When old zone production drops to a point where profit is too small to operate, there still exists the possibility of upper zone production. Consequently it is now the practice of many companies to run Radioactivity Logs in old wells before exploring for new zones. This assures them of perforating in possible production areas instead of impossible shales or other unsaturated strata.

TABLE 1

Company	Well	Before Rework Bbl. per Day		After Running Radioactivity Log and Reworking Bbl. per Day		
		Oil	Water	Settled Production Oil	Settled Production Water	Increase Oil
A	1	Off Production				
	2	Off Production		130 (Both Wells)		130 (Both Wells)
B	1	3		30		27
	2	5		23 (Initial 88)		18
	3	3		20		17
	4	5		5		0
	5	4		14 (Initial 28)		10
	6	5		22		17
C	1	Off Production		15		15
	2	3	300	45	1	42
	3	2	400	0	650	0
	4	15	710	50	2	35
	5	Off Production		40	160	40
	6	3	2	10	30	7
	7	6	1	85		79
	8	12		30	6	18
	9	10	360	45	30	35

[1] Complete details on Radioactivity Logging and its application to a great variety of operations is given in a recently published Bulletin R-44-5 which can be obtained from any Lane-Wells Company office.

New Zones

When a new zone is discovered in a well and this zone is to be tapped in other wells, there are several methods which may be followed; pure guesswork, general geological correlation, and Radioactivity Logging. By far the most economical of these is the Radioactivity Logging. In the past some companies have logged two wells which had several wells in between. Then by means of straight line correlation they would determine zones in the middle wells. An example of how closely Radioactivity Logs will correlate when formations are uniform is shown in Fig. 1. However, this method cannot always be relied upon in the California fields because of the large amount of faulting and the rapid thickening and thinning of formations and because of the possibility of the wells having been drilled either by directional drilling or, in the case of old wells, with uncontrolled verticality.

One interesting situation that demonstrates the economical value of running the Radioactivity Log in each well existed when two wells in the Long Beach field (which were within fifty feet of each other) were to be put into production in an upper zone. The first well had a Radioactivity Log run on it and the productive zone was shown to be approximately 100 feet thick. The well was reworked and the result was a production of 100 barrels a day with a low water percentage. The company was undecided whether or not to run a Radioactivity Log on the second well, the feeling naturally being that the cost of the log could be saved by perforating at the same depth as in the first well. However, it was decided to run the log and when this was done the same zone was found to exist somewhat thickened but 100 feet lower than in the first well. No matter what the cause of the difference in depth, it could easily have proved very costly to the company had the log not been run. Gross production from this well was nearly double that of the first well and the percentage of water was also low.

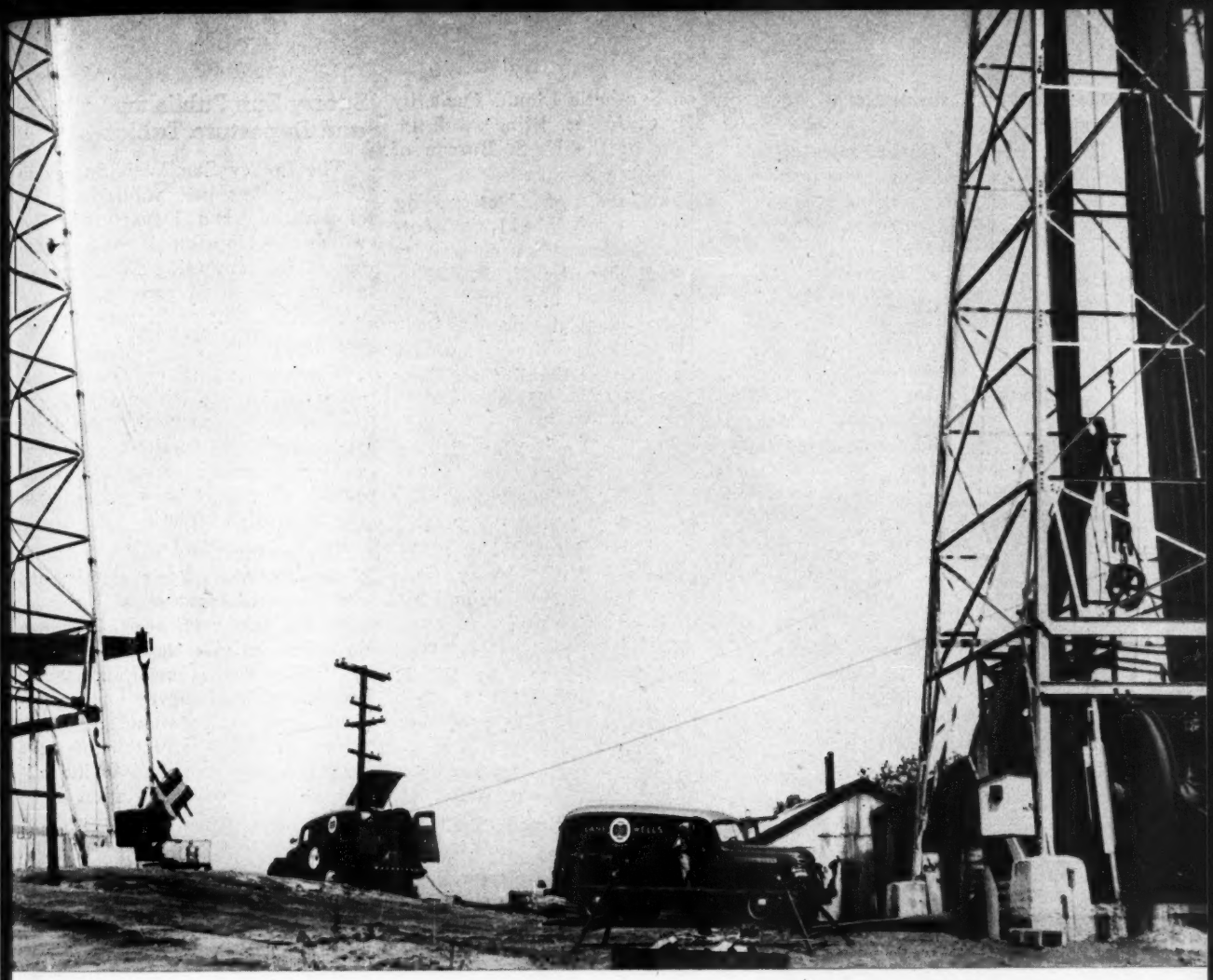
Reliable Information

When an upper zone of an old well is to be gun perforated for production it is necessary to obtain reliable formational data if the entire zone is to be perforated and the shots placed at proper points. If a Radioactivity Log is not run to obtain these data it is like working in the dark; and under such conditions the entire zone is rarely perforated to the best advantage. It is now the practice when running a Radioactivity Log to locate the collars above the potentially productive zones and to use these collar locations as a check when gun perforating. The shooting is thus done at the depths indicated by the Radioactivity Log and perforating in the exact location desired is assured.

When the possibilities of missing a zone and the consequent necessity of having to repull and reperforate a well are considered, the economic advantages of Radioactivity Logging are pronounced. A potential zone may be missed by some miscalculation in correlation, by local disruption of strata, by some physical difference in the well or by inaccurate records. There is an ever increasing realization among operators that the most they know about subsurface conditions is not neough and that all additional data obtainable will aid in their operations. These additional data will sometimes make possible the difference between success and failure. One zone put into full production will repay the cost of a Radioactivity Log many times; and quite frequently more than one productive zone is located by means of this log.

At this time when the maximum efficient production from all existing wells is urgently needed, the working over of old wells is particularly important. Radioactivity Logging has been used extensively throughout the state of California

Developed in the Mid-Continent to provide more complete information than could be obtained from electrical logs, Radioactivity Logging, both Gamma Ray and Neutron, provides accurate results in open or cased hole.



Radioactivity Logs are not influenced by the characteristics of the fluid in the bore hole. Logs made in open hole with very salty mud or with oil base drilling fluid have full details and are easily correlated with logs made on wells which are already cased.

to furnish data by means of which maximum production from zones, both producing zones and upper cased-off zones, has been obtained. In some cases more oil was just not present but in most of the wells considered as prospects for increased production, the results of operations performed were extremely profitable. As an example, the results obtained by Radioactivity Logging and followed by gun perforating at the depths indicated by the logs in a few of the wells so worked over on Signal Hill are given in Table 1. Included in the group of wells cited are those in which reworking did little or no good as well as the ones in which the operations were very profitable. The average increase of oil production for the 15 wells that were aided to any extent by work-over jobs was approximately 33 bbls. per day.

When estimating the value of increased production secured by opening new zones or additions to present producing zones in old wells the decline curve of the area can be used. In most of the older areas the rate of decline is well established with all factors affecting the decline taken into consideration. When settled production from a particular well is increased a certain amount, the volume of new settled production can be located on the average decline curve and the additional production expectancy thus determined.

Balzer Resigns; Joins Hallett Mfg. Co.

Vernon W. Balzer, assistant director of the Refining Division, District 5 (Pacific Coast), Petroleum Administration for War, has resigned to accept a position with Hallett Manufacturing Co., Los Angeles, as manager of its Diesel Division.

Prior to joining the Petroleum Administration for War, Mr. Balzer was associated with the Ford Instrument Co., Long Island City, New York, and certain of its subsidiaries in a technical and executive capacity. During the early days of the war, he was asked to take charge of Refining Materials in Washington for PAW. He was transferred to Los Angeles in January, 1942, to set up the Refining Division of PAW.

Kobe Moves California Division Offices

The California Division sales office of Kobe, Inc., manufacturers of hydraulic oil well pumping equipment and precision gages, were moved on September 1 from the company's general offices on Slauson Avenue to a suite of offices in the Wilson Building, Huntington Park. The address of the new offices, which are in charge of W. F. Slater, Division Manager, will be 217 Wilson Building and their telephone number remains the same—KImball 1271.

W. F. Slater

This move is necessitated by the company's expanding business and it is believed will insure more prompt and effective service for California consumers.

A.I.M.E. Annual Meeting

The Petroleum Division of the American Institute of Mining and Metallurgical Engineers will hold its annual Fall Meeting at the Ambassador Hotel, Los Angeles, on Friday, October 20, 1944. According to Jan Law, Program Chairman, a group of eight technical papers will be presented related to secondary recovery, production engineering, engineering research and other related topics regarding our oil reserves.

The program for the meeting is as follows:

1. The Bureau of Mines Research on Synthetic Liquid Fuels, by H. C. Miller, Principal Engineer of the U. S. Bureau of Mines.
2. Method of Determining Amount of Well Effluents from Different Sources and Injected Gas, by E. P. Valby, Richfield Oil Corporation, Long Beach, California.
3. Measurement of Capillary Pressure in Small Core Samples by G. L. Hassler and E. Brunner, Shell Development Company, Emeryville, California.
4. Volumetric Phase Behavior of Oil and Gas from the Paloma Field, by R. H. Olds, B. H. Sage and W. N. Lacey, California Institute of Technology, Pasadena, California.
5. Average Permeabilities of Heterogeneous Sands, by W. T. Cardwell, Jr. and R. L. Parsons, Standard Oil Co. of California.
6. A Method for Determining Fluid Movement in Wells, by Sherman L. Pease, Shell Oil Company, Bakersfield, Calif.
7. An Experimental Water Flood in a California Oil Field, by E. C. Babson, Union Oil Company of California.
8. Water Permeability of Reservoir Sands, by Norris Johnston, General Petroleum Corporation of California.

The technical sessions will conclude with an informal Stag Dinner, sponsored by the Southern California Section of the A.I.M.E., E. G. Trostel, Chairman, presiding. The guest speaker for the evening will be announced at a later date.

Beesemyer Named Head of Gilmore Oil

Clarence S. Beesemyer has been elected president of the Gilmore Oil Company, succeeding Earl B. Gilmore who has retired from the active management of the company. Beesemyer becomes third president of the organization. The first president was A. P. Gilmore, founder.

Mr. Beesemyer is chairman of the PIWC Fifth District Distribution & Marketing Committee, and a director of the Los Angeles Chamber of Commerce.

Sperry Sun Publishes Latitude and Departure Tables

The Sperry Sun Well Surveying Company has just published a set of Latitude and Departure tables which provide a quick and accurate means for computing the course of a bore hole from records obtained with Multi-shot or Single-shot surveying instruments.

These tables had previously been prepared for use within the Sperry Sun organization and because of their usefulness to the oil industry and in response to numerous requests, they have been published in the form of a bulletin.

The publication is divided into eleven sections. Basic assumptions are discussed together with the determination of vertical depth, course deviation, latitude, departure, use of the tables, tabulation of survey records, plotting of survey maps, practical notes, latitude and departure tables, and the correction of magnetic compass records. An illustration of a survey tabulation sheet is included which illustrates the proper recording of measurements and other data.

All of the tables are well arranged and legibly printed with all numbers in Pica type. Values for the Angle of Inclination are given in quarter degrees from 0° to 31°. From 31° to 45°, the interval is given to each half degree, while from 45° to 55° the inclination is given for each full degree.

The section dealing with the correction of magnetic compass records is practical and useful. Various factors influencing the compass readings are reviewed. A discussion is also given on the determination of the strength of the magnetic field produced by a drill stem or drill bit. Practical data are also included on the determination of the angle of correction.

The publication is well bound with a heavy paper cover and the format has been well planned to enable easy reference to the various sections.

This bulletin has long been needed by the petroleum engineer and will undoubtedly be well received. It is available from the California Oil World at five dollars per volume.

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Prospects for Deeper Zone Production in California

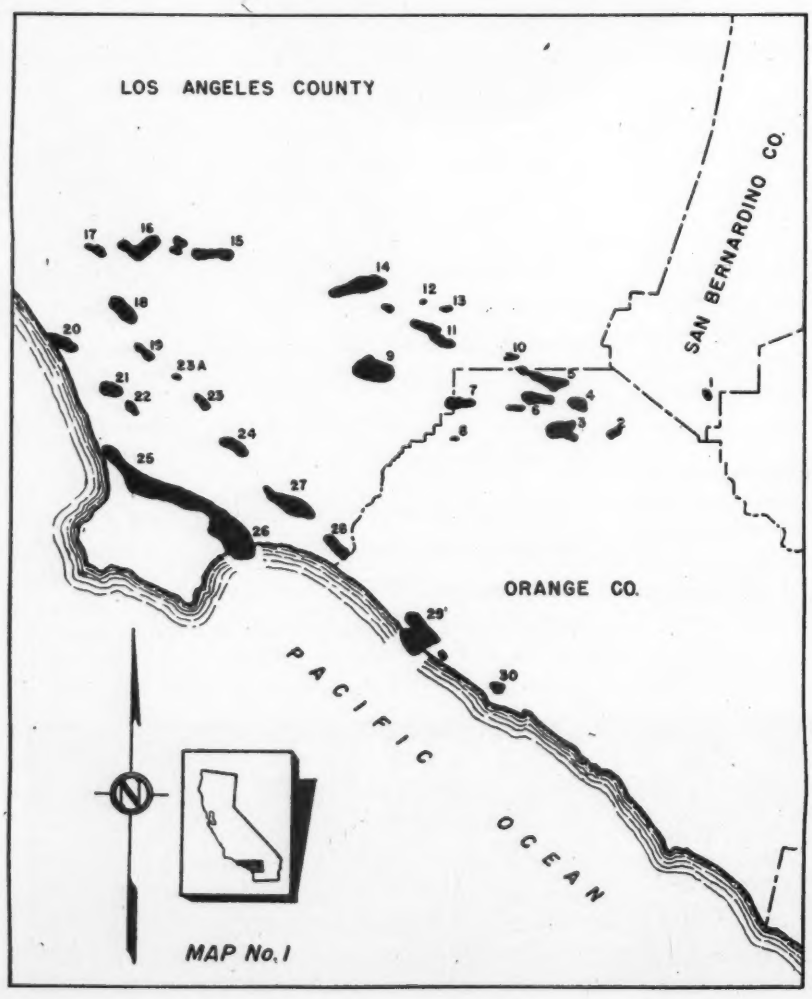
By ALBERT GREGERSEN AND FRANK S. PARKER

District Geologist and Petroleum Geologist, Petroleum Administration for War, District 5.

The demand for California oil to wage the war in the Pacific is so enormous that means must be found, if possible, to accelerate this State's rising rate of crude oil production, to the end that the armed forces in this theatre of operations may continue to be assured of ample supplies of petroleum products, when and where needed.

Even at its present high rate of crude oil production the California oil industry is required to draw heavily on inventories to meet combined military and essential civilian demand on the Pacific Coast. These inventories have now declined to the point where they can no longer be counted on to supplement production in any appreciable quantity.

The accompanying charts were prepared by the authors to give the reader, at a glance, the age of the oldest formation outcropping in each California field, the position in the geologic section of the producing zones, the deepest stratigraphic penetration within the field and the depth of the deepest well drilled. From these data the authors conclude that certain formations appear to offer most of the untested prospects for deeper zone production.



While it is true that an aggressive wildcatting campaign has contributed to the State's reserves of oil, production is still not in sufficient volume to bring the State's output in balance with consumption. It appears highly important, therefore, that the industry in California test thoroughly and promptly the possibility of deeper zone production in existing fields.

In order to assist and encourage operators to prosecute an intensive deeper zone exploratory program, the Petroleum Administration for War, District 5, Production Division, has sponsored a thorough investigation of deeper zone possibilities and the data developed are presented by the authors in this paper.

Fewer Risks

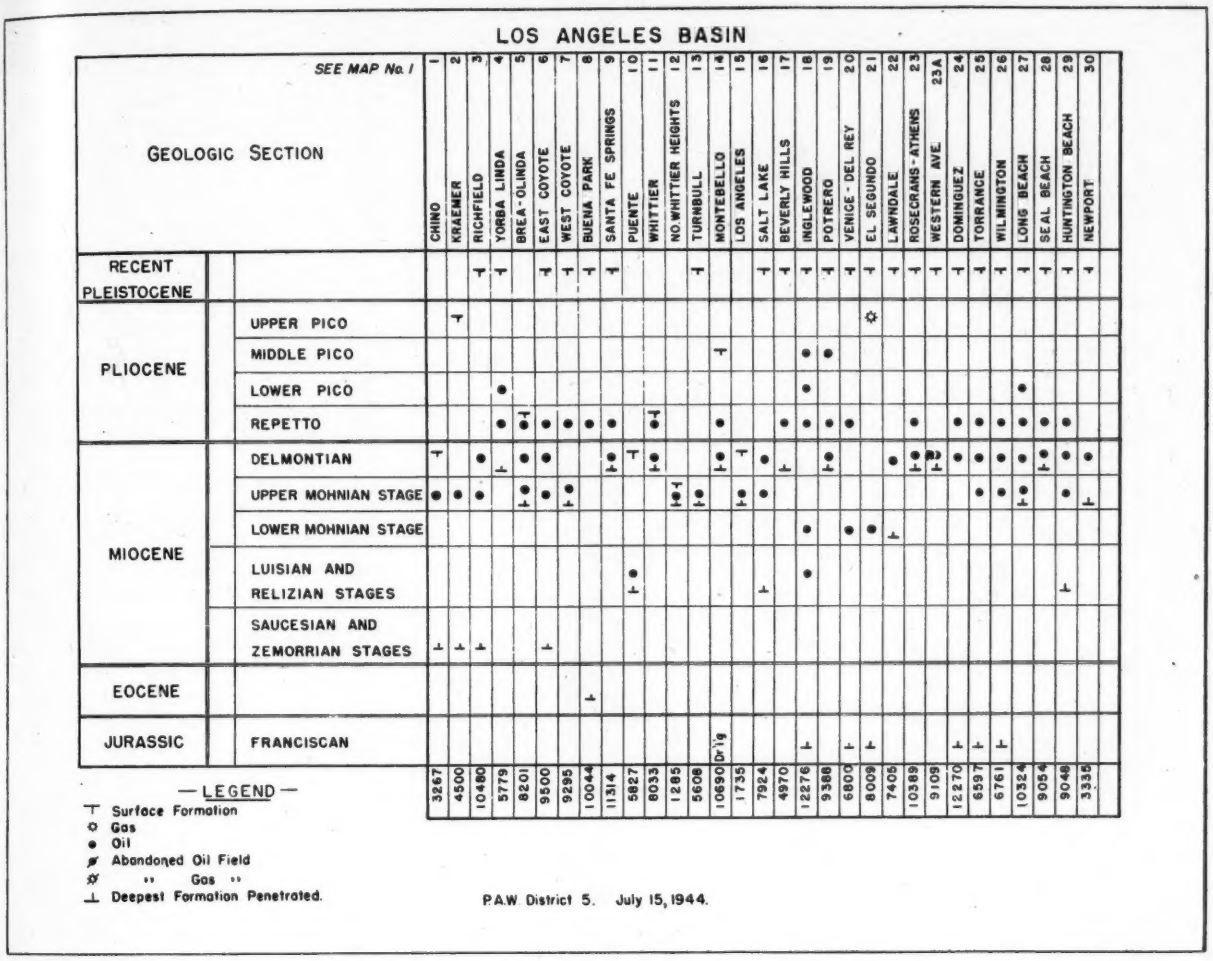
In exploration for deeper zones, one of the principal factors necessary for accumulation of petroleum, namely, favorable structural conditions, has already been proved by the original discovery of the field in which the deeper zone test is to be made. That the risks involved in this type of exploration are smaller than in wildcatting for a new field is convincingly shown by the relatively high percentage of success of deeper zone tests.

Granting that the structural hazard has been materially reduced in deeper zone tests, the most important problem is whether or not sediments with favorable reservoir characteristics and suitable source beds are present under the field where the deep test is to be drilled.

If the objective deeper strata have produced petroleum in other fields located in the same sedimentary basin, the hazard is still further reduced. Then the principal problem becomes one of local distribution, character, and extent of the prospective strata within the basin itself.

For the purpose of this study the accompanying charts were prepared showing the oil fields of the state. On these are indicated the age of the oldest formation outcropping in

LOS ANGELES BASIN



— LEGEND —

⊤ Surface Formation
☼ Gas
● Oil
⚡ Abandoned Oil Field
☼ " Gas "
⊥ Deepest Formation Penetrated.

P.A.W. District 5. July 15, 1944.

the field, the position in the geologic section of the producing zones, the deepest stratigraphic penetration within the field and the depth of the deepest well drilled.

Most of the data included in the charts are available from published material, but it is believed that the compiled charts will be of interest and assistance to operators looking for deeper zone prospects and will be of value for reference.

The charts have been divided so as to cover fields grouped on geographical or geological relationships. In the case of the San Joaquin Valley, the fields are divided into three groups for convenience. Index maps show the location of the fields by a serial number referring to a number on the chart. In some cases a group of several small fields have been included under one number where stratigraphic conditions within those fields are similar and they are located relatively close together.

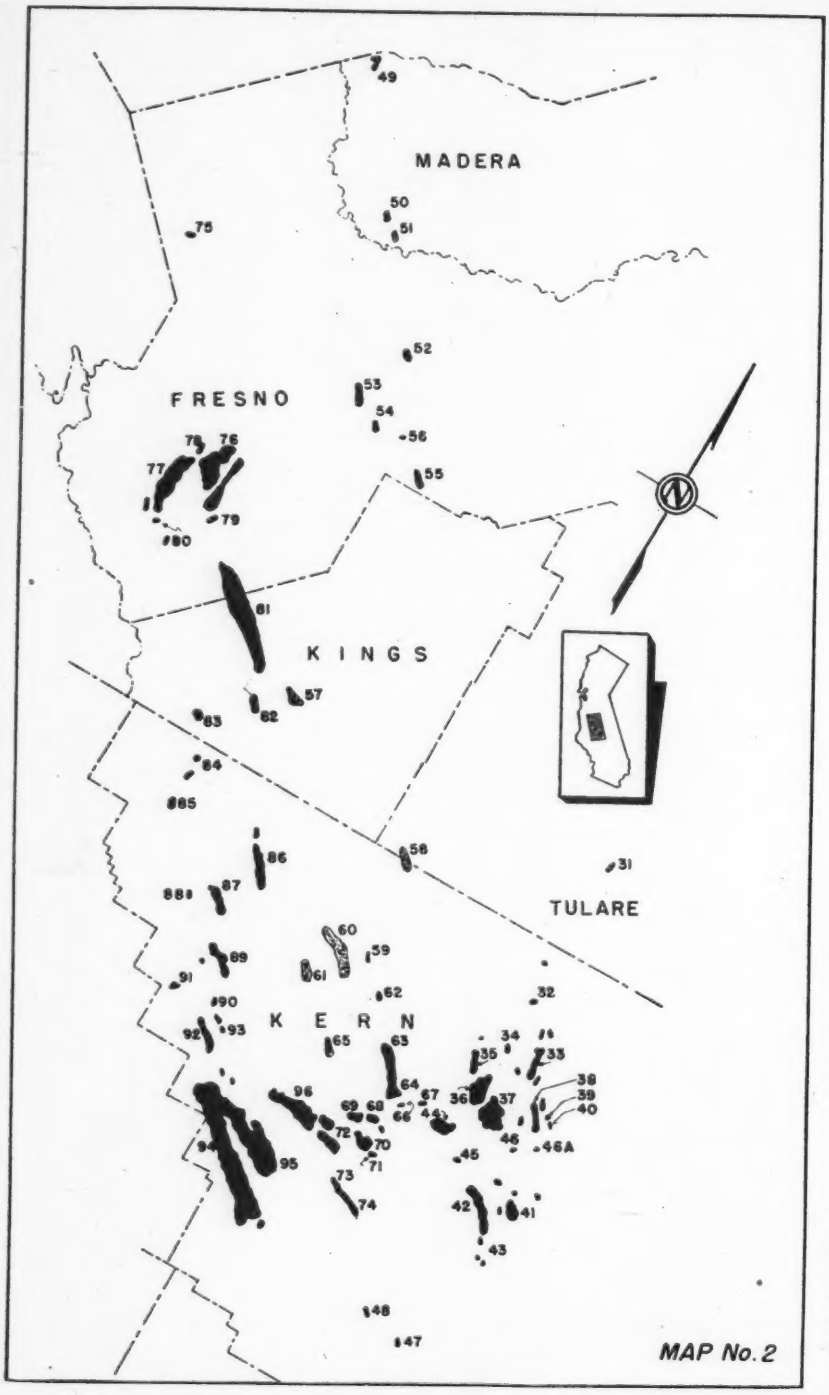
The depth of the deepest well drilled in each field is included on the chart to indicate among other things whether drilling depths for deeper prospective zones would be mechanically feasible. It should be pointed out, however, that the greatest depth reached in a field is not always at the best structural position. For this reason depth is not always significant. Likewise it should be pointed out that the deeper prospects of a field have not necessarily been condemned by unsuccessful stratigraphic penetration below the lowest producing zone. Asymetry, rapid stratigraphic changes, unconformities, and other geologic anomalies may be responsible for the failure of deep tests drilled to date in the field.

Eocene is Best Bet

A number of points with reference to deeper zone prospects stand out.

1. Eocene formations appear to offer most of the untested prospects for deeper zone production in California. That the Eocene is productive of oil and gas has been proved in several fields in the San Joaquin and Sacramento Valley basins as well as in the Ventura Basin. Showings of oil in formations of Eocene age have been encountered in wildcat wells in the Santa Maria and Los Angeles basins, although no commercial production has yet been obtained in these areas. A study of the charts will show that there are many fields in which the Eocene has not yet been reached.

2. Commercial production of gas has been obtained from beds of Cretaceous age in a number of fields in the upper San Joaquin Valley and Sacramento Valley. Oil has been produced commercially from the Cretaceous at Coalinga (Oil City). Showings of oil have been encountered in a number of wild-



MAP No. 2

cat wells on the west side of the San Joaquin Valley north of Coalinga. While the showings and production from Cretaceous are not as extensive and important as from the Eocene there still remain possibilities of deeper zone production wherever a sedimentary section of Cretaceous age, similar to the Oil City section, underlies a known productive structure. This would apply particularly to the San Joaquin Valley.

3. Production from fractured or weathered "basement" rocks may be a deeper zone possibility which may be of considerable importance. There are already some fields in which this type of production is or has been of some consequence, notably El Segundo, Del Rey, and more recently Santa Maria Valley. It is not unlikely that where favorable conditions exist as to porosity of "basement" rocks and source character of overlying sedimentary beds, production may well be obtained from "basement" rocks underlying a number of fields in California.

Deeper zone prospects of interest in particular fields are discussed below. The number shown with each field's name is the reference number assigned to that field on the charts. The data presented on these charts and comments are believed to be up to date as of July 15, 1944.

Los Angeles Basin

A number of fields in the Los Angeles Basin have not completely penetrated the Miocene Section. Although most of the Miocene production has thus far been obtained from the uppermost Miocene, as the chart shows, it is not unlikely that if the entire Miocene Section had been explored in all the fields the picture might have been different. In two instances production has been obtained from the Middle Miocene (Puente 10 and Inglewood 18).

A wildcat well immediately outside the producing area of Buena Park (8) penetrated several hundred feet of Eocene sands with very low permeabilities. Although the sands had good shows of petroleum they failed to produce on formation tests probably because of the low permeabilities. The presence of petroleum in these sands does indicate deeper possibilities in Los Angeles Basin fields located in areas that may be underlain by Eocene sediments. From our present knowledge of the geology of the Los Angeles Basin, those in the northeastern part would be most likely to have Eocene prospects. As indicated on the chart, a number of the fields in the southwestern part of the Basin have already reached the basement (Jurassic ? Franciscan) without encountering any Eocene (18, 20, 21, 24, 25, 26).

Comments on Basin Fields

The following brief comments relate specifically to deeper prospects of fields in the Los Angeles Basin:

(2) *Kraemer* and (3) *Richfield* may both have Eocene possibilities.

(5) *Brea Olinda* appears to have

untested possibilities in Middle and Lower Miocene and Eocene.

(6) *East Coyote* appears to have tested through the Lower Miocene, although some doubt exists as to the conclusiveness of the test. Due to faulting the structural conditions in this field are very complicated and the deep test may not have been located at the best structural position. Eocene may be present under this structure.

(7) In *West Coyote* the entire Miocene Section has not been penetrated as far as available information indicates. Possibiities may be present in both Lower Miocene and Eocene under this field.

(8) *Buena Park*—Deeper prospects in this field would lie outside the present area of production due to overlap conditions. A test is now being drilled to explore such possibilities.

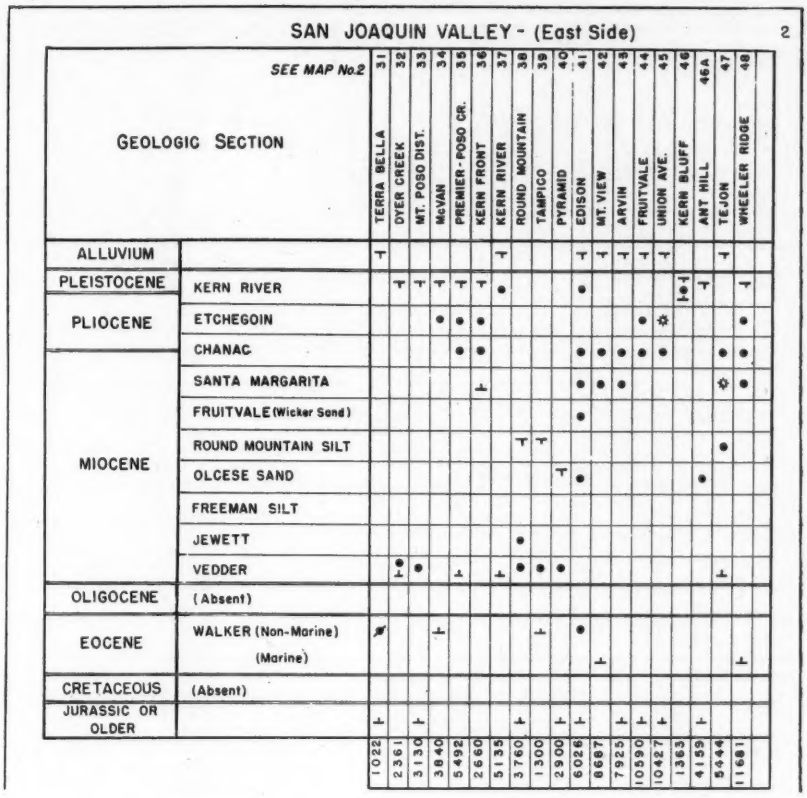
(9) *Santa Fe Springs* — One deep test, Union's Bell No. 100, penetrated a thick section of uppermost Miocene strata. The part of this section lying below present production was low in permeability. The structural location of the test was good. A thick section of Miocene and possibly Eocene should be present below strata penetrated by Bell No. 100.

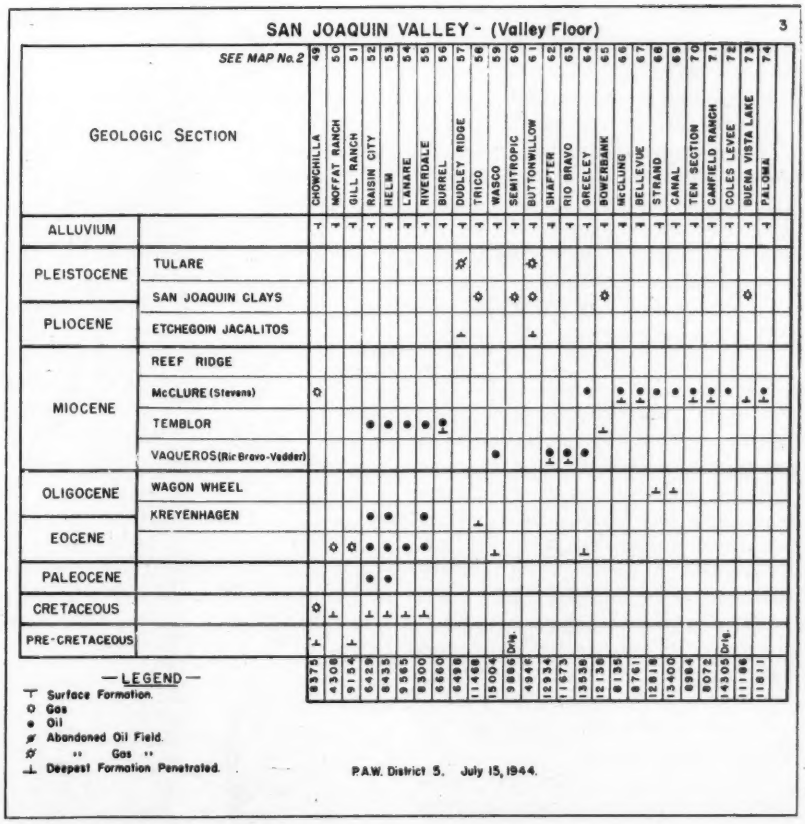
(10) *Puente*—If Eocene sediments are present under this field there may be some possibility of deeper production. Structural conditions and production to date detract from the desirability of deeper prospects.

(11) *Whittier* and (12) *West Whittier* have been tested in the uppermost Miocene only. A recent test in the Whittier field penetrated a considerable section of Upper Miocene below present production with unfavorable results. Permeabilities were low as is often the case in the Upper Miocene in the Los Angeles Basin.

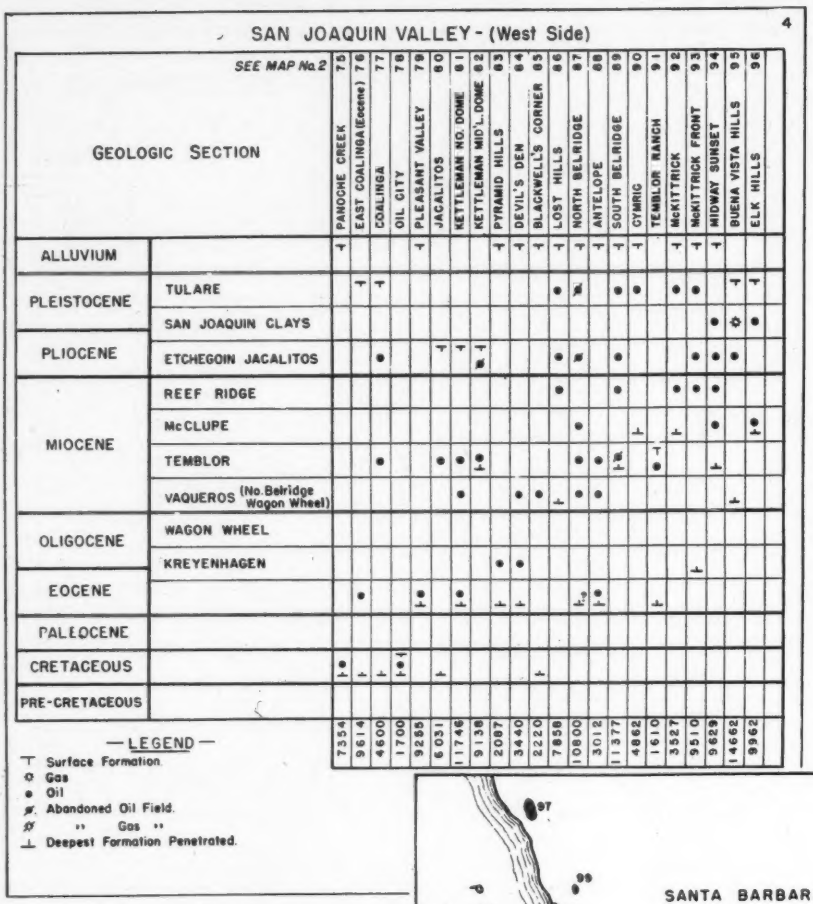
(13) *Turnbull* — One well in this small field was drilled considerably below present production with unfavorable results. Because of the small extent of the field it cannot be considered as having important deeper possibilities, although considerable Miocene section and possibly Eocene may be present below the field.

(14) *Montebello*—A test of deeper prospective zones is now being drilled, Union Oil Company's Howard & Smith No. 3. Low permeabilities have so far been reported in new sands uncovered. A thick section of





SAN JOAQUIN VALLEY - (West Side)



Miocene and possibly Eocene may be expected underlying this field. Structural conditions are favorable for a deep test.

(15) *Los Angeles* — Production in this field has been at shallow depths. A proposed joint test of deeper possibilities may soon be drilled in this field if permits can be obtained from the City of Los Angeles.

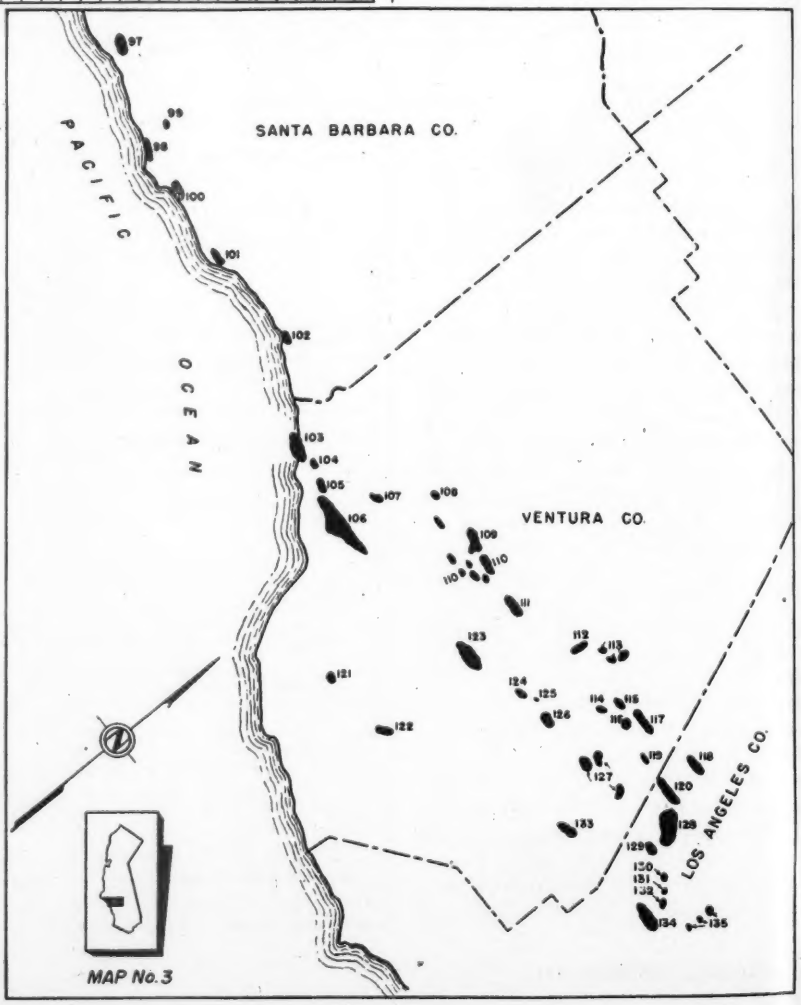
(16) *Salt Lake*—A deep test was drilled last year in this field by Shell Oil Company. The Upper and Middle Miocene section may have been completely penetrated in this well. Structural conditions are complicated and obscure and there may be some question whether the test was drilled in the best structural location. Surface improvements are such that it is unlikely that a suitable deep test will be drilled again in this field.

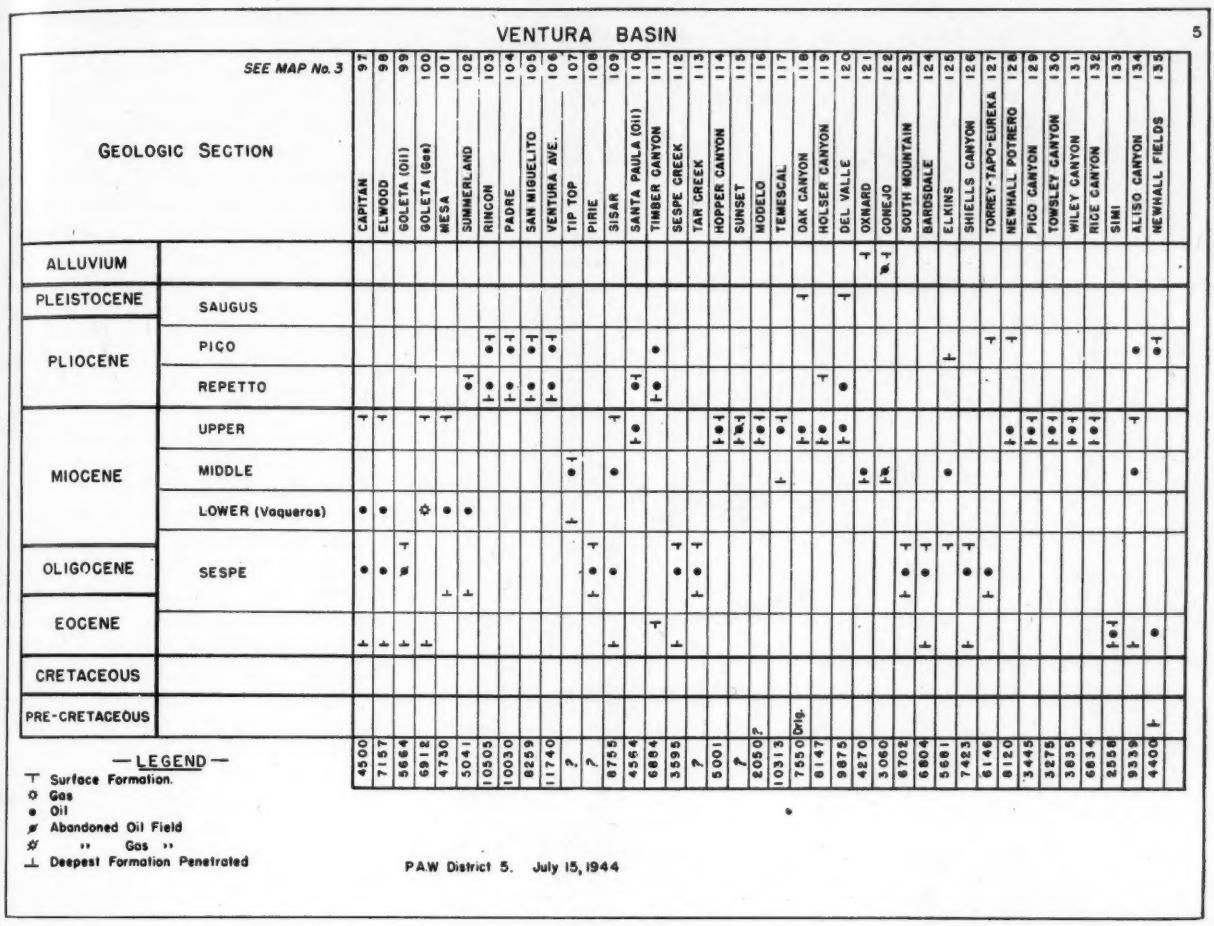
(17) *Beverly Hills*—Deeper untested possiblities exist in this field. Several attempts have been made to obtain zoning variance from the City of Los Angeles to drill a deep test but so far without success.

(19) *Potrero* — Structural conditions are obscure in this field which complicates prospecting for deeper zones.

(23) *Rosecrans - Athens* — Deeper prospects are less promising in view of the negative results in the deep test of the adjoining Dominguez (24) field. However, rapid lateral changes of permeabilities are common in the Miocene so the failure of the Dominguez test does not condemn deeper prospects here.

(27) *Long Beach*—Until the entire sedimentary section has been penetrated in this field, prospects for deeper possibilities are present. A recent deep test north of the main longitudinal Cherry Hill fault proved very disappointing because of low permeabilities. Higher permeabilities of Miocene sands in the Seal Beach field (28) to the southeast suggest that in the southeasterly end of the Long Beach field production may be obtained from the deeper sands, which were found to be too low in permeability to produce commercially in the northwestern part of the field. This idea will be tested by a well now drilling.





Whether Eocene sediments may be found under this field is unknown.

(28) *Seal Beach* — Basement has not been reached in this field and consequently it must be considered to have possibilities for deeper Miocene and possibly Eocene production. One or more deep tests are now under way.

(29) *Huntington Beach* — A deep test is now under consideration in this field. Due to a variety of structural features within the field, several deep tests at different locations will be required to fully evaluate deeper possibilities. A recent deep test of the Surf area, shown on the index map to the southeast of the main field, proved unsuccessful. Structural conditions at depth may not have been favorable for accumulation or low permeabilities may have been the reason for the failure of this test, which was not carried to basement as far as we know.

Valley (East Side)

In most of the fields in this group wells have penetrated the principal objective sand (Vedder-Miocene), and with few exceptions the basement has been reached.

(35) *Premier,* (36) *Kern Front,* and (37) *Kern River*—In these fields there is a possibility that Eocene sands may be present, and, if so, they may well be productive.

(46) *Kern Bluff*—This recently discovered field is producing from the Kern River series. Little is known so far about structural conditions in the field and deeper possibilities are therefore unknown.

Valley Floor

(52) *Raisin City* and (55) *Riverdale*—In view of the absence of oil or gas in the top of the Cretaceous in the wells which reached it, the deeper Cretaceous prospects do not look very promising.

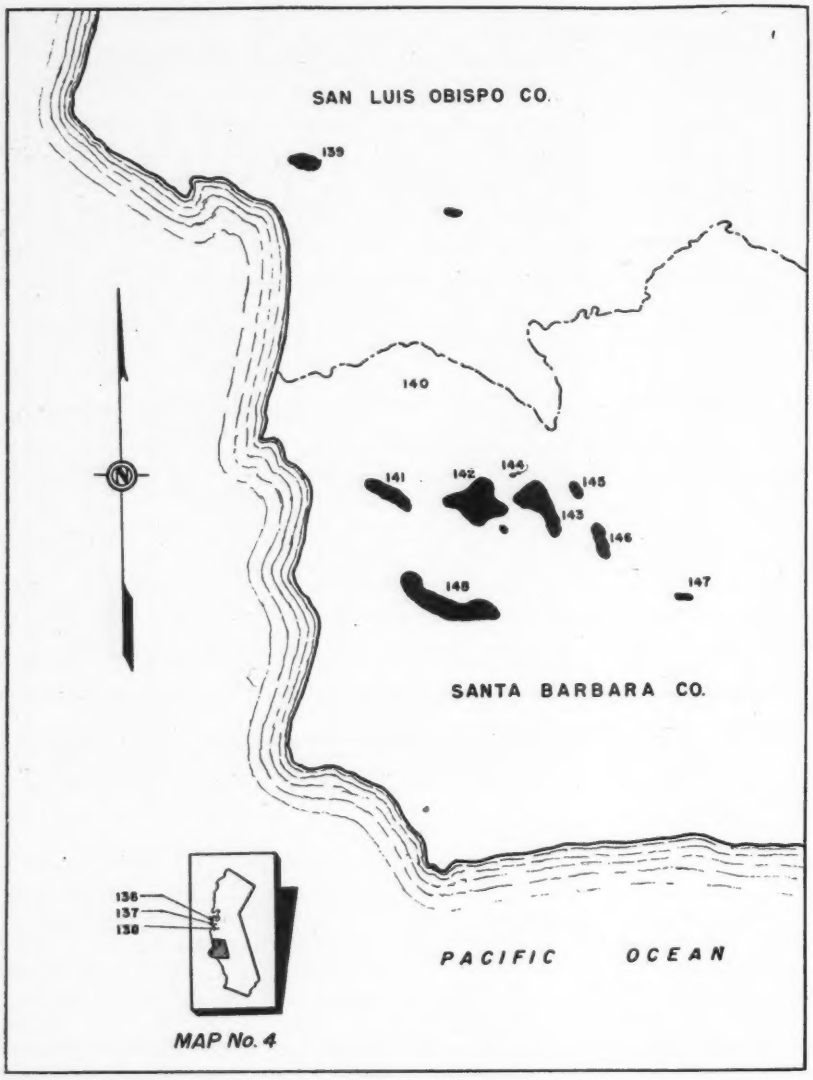
(53) *Helm* and (54) *Lanare* may have deeper possibilities in the Cretaceous. No deep test has been carried much below the top of the Cretaceous in these fields, at what appeared to be the most favorable location.

(58) *Trico* — One deep test was drilled to a depth of 11,466 feet just outside the northeast limits of the productive area of this field. The well bottomed in Upper Eocene (Markley). The location was chosen east of the apex of the shallow structure because seismograph work indicated a shift of the axis in that direction at depth. For this reason it does not seem likely that a deep test within the limits of the field would be justified.

(59) *Wasco* — The discovery well in this field was carried into the Eocene, but was plugged back to the present production of Lower Miocene age. Showings of oil were reported from the underlying Oligocene and Eocene to bottom of the hole.

(60) *Semitropic*—Geophysical work has indicated a shift to the east of the apex of this structure at depth. A well is at present being drilled to test the deeper possibilities outside the present producing area on this theory.

(61) *Buttonwillow* — No deep test has been drilled within the limits of this field below the San Joaquin Clays



MAP No. 4

(Pleistocene-Pliocene). Deep tests on the Bowerbank structure to the southeast were not encouraging so far as the Buttonwillow deep prospects are concerned. However, the structure may warrant a deep test. Prospective zones would be very deep with the Vedder-Rio Bravo sand probably at 15,000 feet.

(62) *Shafter*—The possibility that Eocene sands may be productive in this area will eventually justify a deeper test. The structure is small, and untested zones would be below 13,000 feet.

(63) *Rio Bravo*—No test has been carried to the Eocene within the field, and prospects appear fair enough to warrant deeper drilling. Untested zones lie below depths of 11,500 feet.

(64) *Greeley*—One well on the edge of the field, Elrich Community No. 1, was drilled to basement at a depth of 13,538 feet. This well encountered about 40 feet of gray Eocene sand. The possibility that this sand may prove productive at a better structural position is now being tested near the top of the structure.

(65) *Bowerbank*—A deep test has been drilled to the Temblor in this field within the area of shallow gas production. Closure at depth is reported questionable on the basis of geophysical data, and a deep test for Vedder sands does not appear very attractive.

(66) *McClung* and (67) *Bellevue* have not been tested much below present Stevens sand production. Structural conditions may not be favorable for a deeper test in either of these fields.

(68) *Strand* and (69) *Canal* fields have been tested to the Wagon Wheel (Oligocene) with no production below the Stevens Zone. The Vedder sand was reported to be very low in permeability. Eocene possibilities may exist under both of these fields at depths of more than 13,500 feet.

(70) *Ten Section*—Because of the size of this structure, the untested Vedder and Eocene sands present very attractive deeper zone prospects and lie within currently feasible drilling depths.

(72) *Coles Levee*—A deep test is at present drilling on this structure. The well will probably be carried to the Vedder. Eocene prospects should also be present under this field.

(73) *Buena Vista Lake* (74) *Paloma* — Deeper drilling in this field should be of interest since only the equivalent of the Stevens Zone has thus far been tested. Because of faulting, thinning, and lateral changes in facies in the Paloma Field, the best location for a deep test may not be at the apex of the structure. A deep test to explore new formation would have to be drilled to depths in excess of 10,500 feet. The Vedder Sand, or its equivalent, may lie at a depth of more than 13,500 feet, and the Eocene may not be reached above a depth of 15,000 feet.

Valley (West Side)

Recent discovery of Eocene production in the Antelope (88) Field has enhanced the deeper prospects for Eocene production in other fields on the west side of the San Joaquin Valley. Previously the most southerly Eocene production was obtained from the Kettleman North Dome Field (81) about forty miles to the north.

(81) *Kettleman North Dome*—The possibility for deeper production in this field exists until the entire sedimentary section has been penetrated. The deepest production now comes from Avenal Sand of Eocene age. The entire Eocene section has not been penetrated, and its thickness is not known. Cretaceous beds should be found underlying the structure which, because of its size, should be one of the most attractive places to test possibilities of the Cretaceous in the San Joaquin Valley.

(82) *Kettleman Middle Dome* — Should Lower Eocene and Cretaceous prove productive at North Dome, this field appears favorable for a deep test

of the Eocene and Cretaceous possibilities.

(86) *Lost Hills*—The deep possibilities of this large structure are promising in the Eocene. A deep test is now under way in the southeastern end of the field which is located to test the possibility of accumulation in sands older than any so far penetrated. The location is made on the southeast plunge of the structure with the idea that overlapped Eocene sands may be present.

(87) *North Belridge*—Deeper prospects still exist in this field in the Eocene and possibly in the Cretaceous.

(88) *Antelope*—Structural conditions in this field do not favor deeper accumulation within the productive limits. Rapid lateral changes in facies, overlap conditions, and faulting offer possibilities for production in the vicinity of the present productive area in beds older than those presently producing in the field. Discovery of Eocene production from a wildcat to the north of the field improves the prospects for Eocene production on the west side of the San Joaquin Valley south of Kettleman Hills.

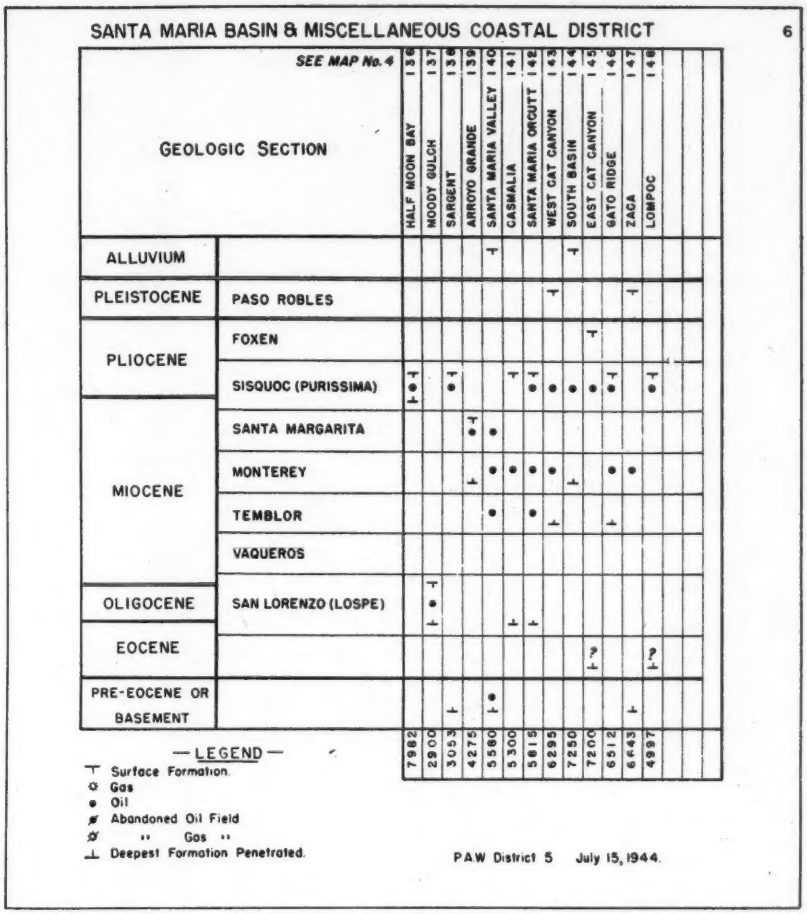
(89) *South Belridge* — The structural conditions at depth in this field are not well-known. Deeper possibilities below the McLure (Upper Miocene) are probably present. One deep test found good showings in the Temblor below 11,000 feet, but was abandoned largely for mechanical reasons.

(93) *McKittrick Front* — A deep test was drilled recently into the Oligocene in this field. Present production comes from sands of Pliocene age. Deeper prospects above the Eocene appear to have been condemned.

(94) *Midway Sunset*—Due to the structural and stratigraphic complexity and large areal extent of this field, it is very likely that deeper possibilities exist. Many local areas remain untested in deeper zones known to be productive in other parts of the field. The United States Geological Survey is at present making a detailed study of such possibilities, the results of which should reveal some favorable areas for deeper zone tests. One deep test is now being drilled in Section 36-12N-24W to test for zones below any now producing in the field.

(95) *Buena Vista Hills*—The recent discovery by Standard Oil Company of the 27-B sand indicates the possibility for deeper production in local areas within this extensive field. One deep well drilled by Honolulu Oil Company in the southeastern part of the field was discouraging with respect to Miocene possibilities in that part of the field. Stratigraphic variations may complicate the picture. A recent well drilled outside the field on the northeast flank of the structure by the Union Oil Company (Well U. S. No. 1-B in Section 20-31-24) encountered no permeable sand in the Miocene to a total depth of 9542, at which point the well was approimately 1000 feet below the top of the Miocene. Eocene prospects under this large structure should be given some consideration.

(96) *Elk Hills*—Lower and Middle Miocene and Eocene possibilities may exist in this field. Because of the size of the structure these may be very important.

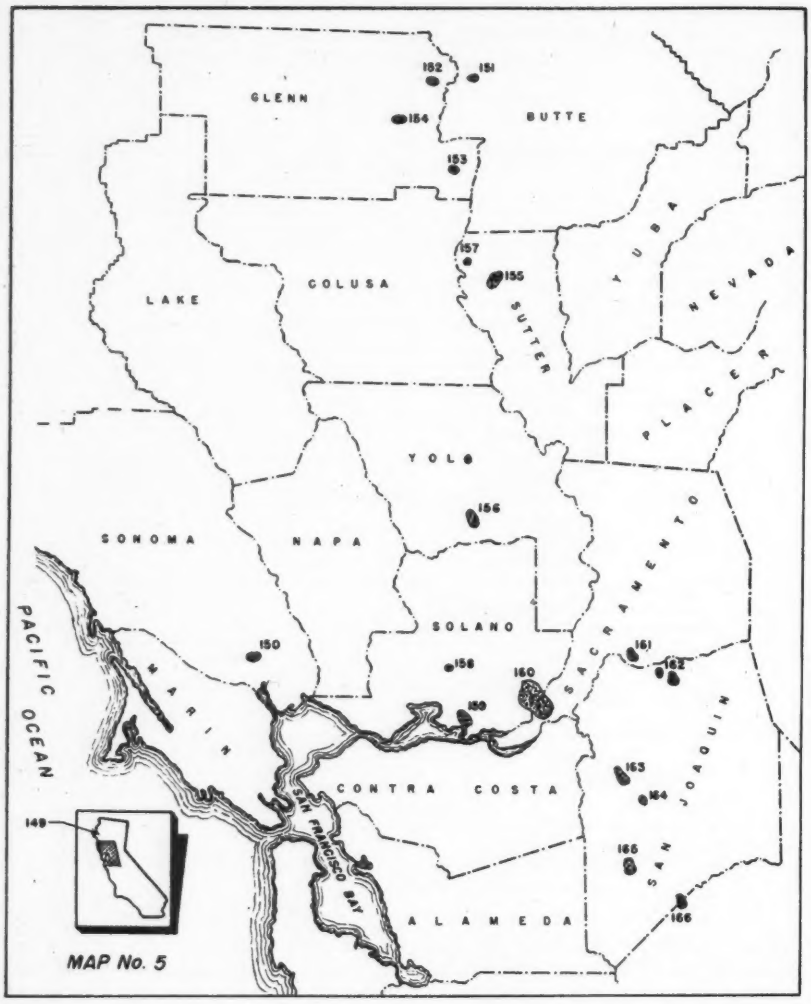


Ventura Basin

In the Ventura Basin one of the most promising untested possibilities is that of accumulation below the major thrust faults (San Cayetano and Oakridge) bordering the Santa Clara River Valley. While such accumulation will in general follow the trend of the present producing fields located above the thrust faults, it will be coincidental if they should underlie present production. For this reason they cannot be considered deeper zone prospects in the ordinary sense, and in most cases the age of prospective zones while at greater depth will be younger than those presently producing.

(97) *Capitan* and (98) *Elwood*—Although wells have been drilled into the Eocene in both of these fields without finding any production, the possibilities of the thick Eocene section which must underlie these fields cannot be considered as having been adequately tested.

(103) *Rincon*, (104) *Padre*, (105) *San Miguelito*, and (106) *Ventura Avenue*—In none of these fields has the entire Repetto (Pliocene) section



been penetrated. Deeper possiblities in the Pliocene are therefore present. Production can also be expected in the underlying Miocene which produces in the Ventura Basin both east and west of these four fields. Similarly, possibilities in Sespe (Oligocene) and Eocene beds may also be present. Although drilling to these formations will be deep, they appear to present some of the most promising deeper prospects in California at the present time.

(118) *Oak Canyon,* (119) *Holser Canyon,* and (120) *Del Valle*—These three fields have not been tested below the Upper Miocene. Prospects for deeper production from older Miocene beds and particularly from the Eocene which produces to the south, (113) Simi, and east (135) Newhall fields are a possibility in these three fields. A deep test is now in progress in the Oak Canyon Field.

(120) *Oxnard*—Because of structural conditions in this field, it is most likely that deeper production (stratigraphically) here will be outside the present producing area which is very small owing to the limited development in the field.

(123) *South Mountain,* (124) *Bardsdale,* (125) *Elkins,* and (126) *Shiells Canyon*—These fields probably have some further deep possibilities above the Oakridge thrust fault. There are very promising prospects for accumulation underneath the major thrust which passes below the four fields. Accumulation below the fault will probably not be affected by structural conditions above the fault. For this reason the deeper possibilities under these fields must be considered far more hazardous than is normally the case in deeper zone prospecting under a known field.

(128) *Newhall Potrero*—This field should have excellent deeper zone prospects for Miocene, Oligocene, and Eocene production. A deep test is now in progress.

(129) *Pico Canyon,* (130) *Towsley Canyon,* (131) *Wiley Canyon,* and (132) *Rice Canyon*—These four fields have deeper prospects in the equivalent of the Sesnon Zone producing in the Aliso Canyon (134) to the south as well as from the Eocene producing in Newhall (135) to the northeast and Simi (133) to the southwest. A deep test is planned for Pico Canyon.

(134) *Aliso Canyon*—Several wells have been drilled to the Eocene in this field without success. Further information about structural conditions may eventually reveal a better location for a test of the Eocene.

Santa Maria Basin

Deeper possibilities in the Santa Maria Basin fields are largely prospects for accumulation in permeable rocks below the Monterey (Upper Miocene) where the oil from Miocene shales had a chance to migrate into such older rocks. One such type of accumulation would be similar to the schist and schist conglomerate accumulation in the Venice (20) and El Segundo (21) in the Los Angeles Basin.

Since this type of accumulation does not necessarily follow the pattern of upper zones, it appears that several deeper tests would have to be drilled in order to test adequately this type of accumulation in each field. The following fields may have possibilities of this type: (140) *Santa Maria Valley,* (141) *Casmalia,* (142) *Santa Maria-Orcutt,* (143) *West Cat Canyon,* (145) *East Cat Canyon,* (146) *Gato Ridge,* and (148) *Lompoc.*

Northern District Fields

(149) *Tompkins Hill*—This field which presently produces wet gas from beds of the Middle Pico (Pliocene) age should have good prospects for oil production from older Pliocene and possibly from Miocene sediments which may be present under the field.

(160) *Rio Vista*—In this gas field, which is by far the largest in the state, the entire Eocene section has not been penetrated so far. Because of the presence of gas in beds of Upper Cretaceous age in fields to the north and south, there is good reason to anticipate Cretaceous gas production. In view of the large size

of the structure this appears to be the most important prospect for adding substantially to the gas reserves of the state by deeper drilling within known fields.

Most of the gas fields of the Northern District have penetrated and tested beds of Upper Cretaceous age. In some of these fields, only the uppermost sands in the Cretaceous have been productive. Until further drilling of deeper Cretaceous sands has been undertaken, most of the fields with appreciable anticlinal closure may be considered to have deeper possibilities.

Conclusions

The history of California oil development shows the importance of deeper zone discoveries not only in adding to our reserves, but also in increasing current production rates.

Results of some of these deeper zone discoveries have far exceeded the most optimistic estimates made at the time of the original field discovery. Santa Fe Springs, Rosecrans, North Belridge, Sunset Midway, and Ventura Avenue are just a few examples of fields in which such has been the case.

The continued development of deeper zones created a challenge to the industry for improvements in drilling technique and equipment which the industry has met admirably to date. These improvements have made possible still deeper exploration until today we speak of 15,000-foot tests without batting an eyelash.

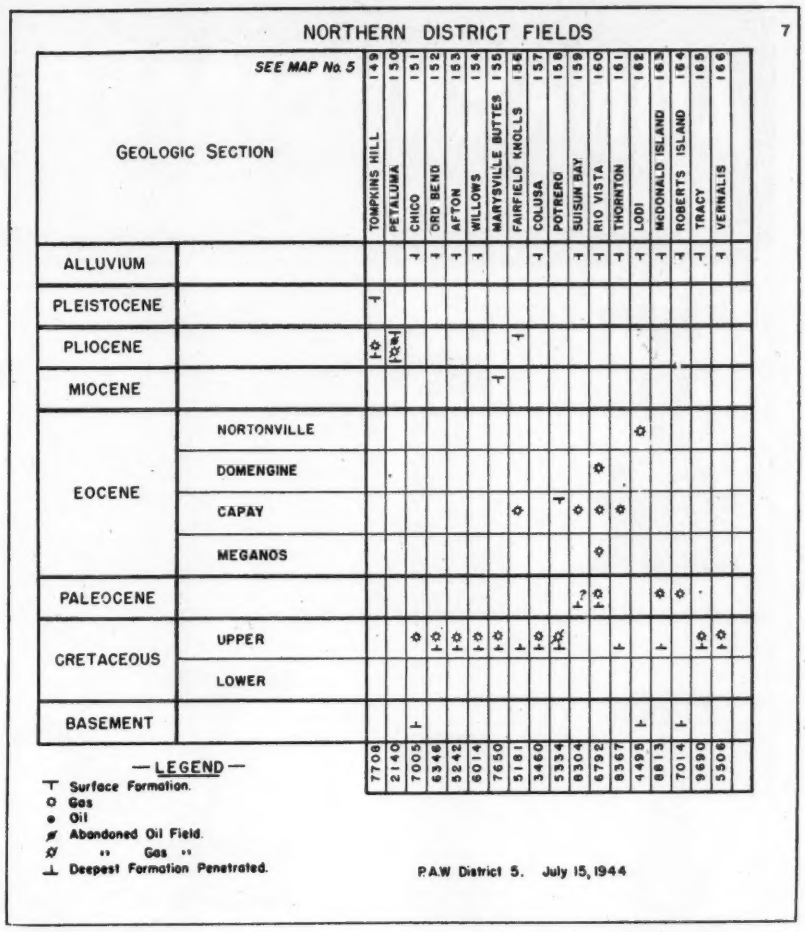
Until the full stratigraphic section has been penetrated in all California oil and gas fields, we may expect this development to continue, and, as a result, new reserves will be added to our supply.

It is hoped that this paper will call attention now to some of the remaining undrilled, deeper-zone prospects at a time when increased production and available reserves are urgently needed to carry on the war.

SUPPLEMENT TO SEPT. 1, 1944

Revisions of data on operations since July 15 are summarized below by reference to the key number of the field.

(8) Buena Park. The outpost of this field was drilled to 11,422 and plugged back to 11,200 to test reported oil sands.



(12) North Whittier Heights. A second well drilled to 1900 feet and plugged back to 1600 feet found oil in a sand 400 feet below the previously discovered producing zone.

(14) Montebello. A second deep test is drilling in this field. However, it is within the old area of Pliocene shallow production.

(18) Inglewood. A deep test below the Sentous is believed to have been unsuccessful in discovering a new deep zone.

(26) Wilmington. A number of wells have been drilled, and others planned, to test the basement weathered zone below the Ford zone.

(60) Semitropic. The deep test of this field had reached about 11,987 feet by Sept. 1.

(64) Greeley. The deep test reached basement at 13,465 feet but testing of the Eocene had not been completed.

(72) Coles Levee. The deep test of this field was approaching the California deep hole record at 14,845 feet with results not reported.

(94) Midway-Sunset. The deep test in section 36-12n-24w was abandoned at 8647 feet, probably still in Middle Miocene beds.

C.N.G.A. Plans 19th Annual Fall Meeting

On October 13 the California Natural Gasoline Association will hold its 19th Annual Fall Meeting at the Los Angeles Biltmore Hotel. An all-day technical session will be followed by a dinner and stage show.

Cycling: Refining processes for utilizing light petroleum fractions; the application of alkylation, isomerization and other catalytic methods to natural gasoline fractions; and the description of a new absorber tray efficiency test are among the papers scheduled.

Dinner tickets are $5.00 per plate and can be obtained through George A. Tyler, C.N.G.A. Secretary.

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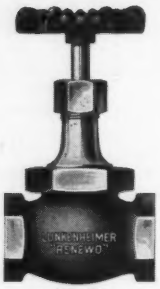

Fig. 73
Bronze "Renewo"

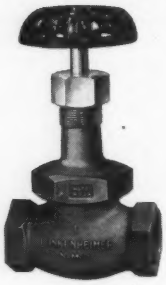
Fig. 123
Bronze "N-M-D"
(Non-Metallic Disc)

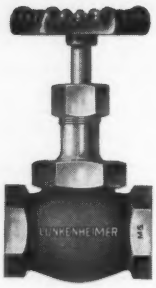

Fig. 407
Bronze Regrinding

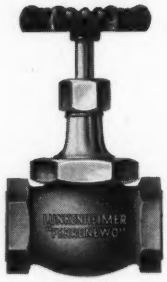

Fig. 1021
Iron Body "Ferrenewo"

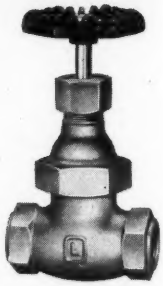
Fig. 1720
Steel Globe
(Bonnet-Thread-Bushing)

Fig. 2125
Bronze Gate
Double Wedge Disc

Fig. 2129
Bronze Gate
Single Wedge Disc

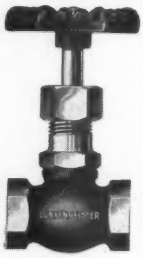

Fig. 906
Bronze
Needle Valve

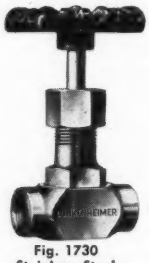

Fig. 1730
Stainless Steel
Needle Valve

Fig. 554
Bronze Regrinding
Swing Check

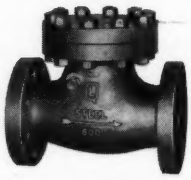
Fig. 1495
Steel
Swing Check

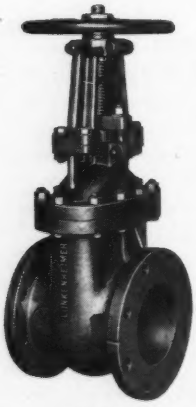

Fig. 1430
Iron Body Gate

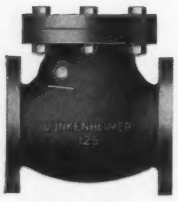

Fig. 1790
Iron Body Swing Check

Fig. 1640
"King-clip" Gate

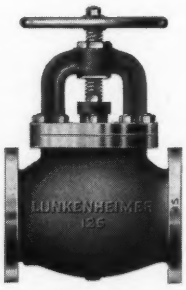

Fig. 1123
Iron Body Globe

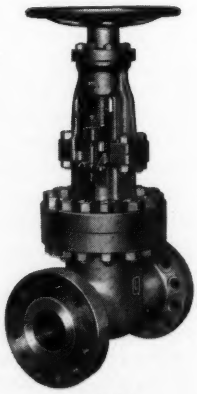
Fig. 1650
Steel Gate

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John A. Brown - Industry Leader - Passes Away

John A. Brown, President of Socony-Vacuum Oil Company, Inc., and former President of the General Petroleum Corporation of California, died Saturday morning, Sept. 9, 1944, at the Royal Victoria Hospital, Montreal, following a gall bladder operation performed on August 13.

Mr. Brown, who for years was a leader in the California Oil Industry, had a typically American career. Beginning as a general utility boy for a hardware store in Philadelphia, at $5.00 a week, and becoming the head of one of the country's largest corporations, he was recognized as one of the ablest of America's business managers.

While president of General Petroleum Corporation, Mr. Brown organized and was elected the first president of Kettleman-North Dome Association. This association was the first, and is still the largest and most successful unit development of its kind within the oil industry. It is regarded as a model among associations of this nature.

Mr. Brown was born at Hampton, Adams County, Pennsylvania, in 1885, the son of John and Viola (Albert) Brown, and a descendant of Rudolph Brown who came to America and settled in North Carolina in the 17th century. He studied at Girard College, Philadelphia, and in 1901 was employed by the Pennsylvania Coal & Coke Company in the Auditor's Department, and later as Credit Manager. He was interested in financial matters, and this training helped him to achieve an unusual understanding of corporate finance.

In 1911, he entered the oil business, as Secretary-Treasurer of a small oil company in Taft, California, where he acquired at first hand a practical knowledge of oil drilling and oil production. When the company was sold, he was given a job with the Cecil Rhodes group which had mining interests in North and South America, including oil in Mexico. He negotiated the sale of the Mexican oil interests to Standard Oil Company of New Jersey in 1917, and was offered the post of

John A. Brown

Assistant Manager of that company's Mexican business, with headquarters in Tampico. He was in Mexico until 1926, and then spent two years in the Dutch East Indies in charge of the company's operations there.

Returning to the United States in 1928, Mr. Brown was made Vice President of the General Petroleum Corporation in Los Angeles, a subsidiary of the Standard Oil Company of New York. In 1930, he became President of General Petroleum, and in November, 1933, he came to New York to become head of Socony-Vacuum Oil Company, Inc., which was formed in 1931 as a merger between Standard Oil Company of New York and Vacuum Oil Company.

Mr. Brown was widely respected, both inside and outside the oil industry, for the soundness of his judgment, the scope of his informatoin and the honesty and kindliness of his character.

In the organization of the petroleum industry after Pearl Harbor, as established by the Petroleum Administration for War, Mr. Brown was Chairman of the general committee of the industry in District No. 1, comprising the 17 Eastern states and the District of Columbia. He was a member of the Petroleum Industry War Council and Chairman of the National Oil Policy Committee. In April, 1944, he was designated as one of the industry advisers to the official Anglo-American conference on oil policies.

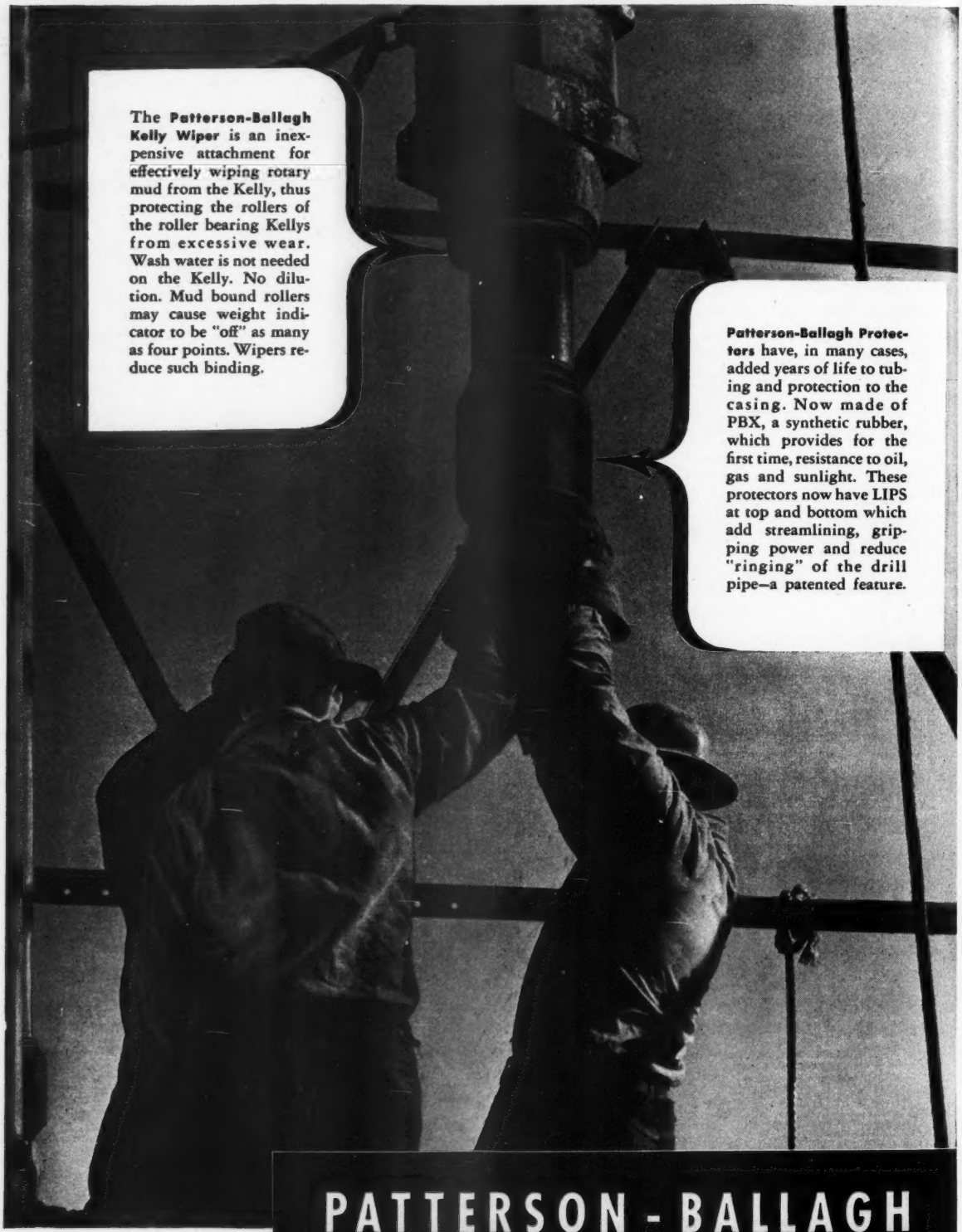
As both a leader in the oil industry and a close student of economics, Mr. Brown was a strong believer in free, competitive enterprise, and took an active part in opposing Government participation in the oil business, whether here or abroad.

Mr. Brown's various reports to stockholders and employees attained a reading outside of those groups because of the clarity of their expression and the profundity of their thought. At one time, wide circulation was given to his definition of the function of management, in which he stated:

"The governments all want us to pay higher taxes and provide more employment; the employees want more wages, those who sell to us want us to pay more; those who buy from us want to pay less; and the stockholders want more dividends. These are normal and natural desires, and we try to meet them."

Mr. Brown was a Director of the American Petroleum Institute for many years, and a member of the Executive Committee. He became a Director of the Chase National Bank of New York in 1934 and a member of the Executive Committee in 1942. He was Vice President of the New York State Chamber of Commerce. He was also a Director of the New York Association of Commerce & Industry, of the Economic Club of New York and of the Greater New York Fund, Inc. He was a member of the Metropolitan Club of New York, St. Andrews Golf Club of Westchester County, New York, and the Blind Brook Club. He was married in New York City, September 22, 1916, to Ella Marie, daughter of Martin Mathisen of Jersey City, New Jersey.

What the well dressed Kelly will wear



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Marshall Returns to Private Practice

The California oil industry—by the time this issue goes to press—will be welcoming back a favorite son.

J. Howard Marshall, chief counsel and deputy petroleum administrator, has left the PAW, after seeing through one of the toughest jobs in Washington for his old stand in San Francisco,—as a partner in the firm of Pillsbury, Madison and Sutro.

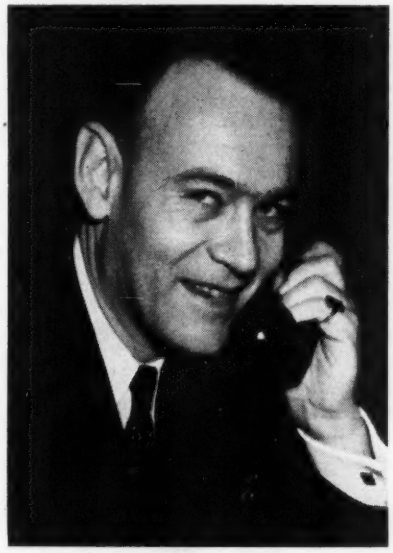
Although we can recall a stiff scolding delivered some months ago to industry men who were quitting their jobs on the Washington battle-front to return to their pre-war pursuits, this scolding does not apply to Howard Marshall.

It's only a little more than three years since Howard turned up in the Nation's Capital for his second trick at a Government desk (he was summoned here by Secretary Ickes once before, in 1933, to become assistant solicitor of the Interior Department and a member of the Petroleum Administrative Board) but, to Howard, it must seem like a lifetime.

Oil men are only too familiar with the PAO's, the CMP's and the various other war-time restrictions that have descended upon them from Washington. Howard Marshall was the luckless individual who had to weigh and review each order before it was finally initialed; sit in on long and (presumably) vitriolic conferences with attorneys from other Government departments, such as the Office of Price Administration, the War Production Board, the Office of Defense Transportation, etc.; write a lot of things that came sternly forth from PAW to torment the rugged individualists of the industry and do many an unpleasant chore for which he will never receive his fair measure of praise . . . The job of PAW Chief Counsel is strictly K. P.

As a rather privileged character with "California contacts," it is possible that this writer imposed upon Marshall more than the average reporter interested in oil news (ordinarily, chief counsels are avoided by the press and, usually, with good reason). If, however, his office was invaded by other writers, it is certain no "good will"—either for PAW or for the industry—was lost in the transaction.

More than any other public official in Washington, J. Howard Marshall had the knack of "talking you out of a good story,"—but (in retrospect) never without a good reason . . . Reporters do not take kindly to having the rug pulled out from under them, but Marshall has his own Judo technique which has knocked several good stories clear



J. Howard Marshall

off the pages of CALIFORNIA OIL WORLD. And all because he was smart enough to put it in language the layman could understand that the story was NOT in the public interest; might have a harmful effect on the war effort; might threaten national security, etc. It hurts to admit it, but he was always right.

(This personal stuff may seem a bit out of place in an oil magazine, but the impression a man in public office makes upon the press seems to us typewriter-pushers important.)

Petroleum Administrator Ickes—regardless of industry's pre-war feelings about him—displayed the Ickes acumen when he sent his second "urgent request" to the Californian to come to Washington and help from the "very beginning" with the stupendous job of "oiling the war." Commenting on Howard's faithful work and his early arrival on the pre-war Washington scene (June, 1941), Ickes said:

"Continuously since then he has applied his unique experience in law, in Government, and in the oil industry, to the creative problems of organizing and charting a course for PAW. Conscientiously, fairly, and impartially, he has discharged the responsibilities entrusted to him."

Ickes further complimented Marshall on his services during the NRA period:

"The assignment with PAW represents the second time that Mr. Marshall, at my personal request, has entered the public service in time of crisis," he said. "He was a member of the Petroleum Administrative Board during the NRA period and helped to win the battles of 'hot oil'—a step forward in the conservation of our vital petroleum supplies for which, in the present emergency, we may indeed be grateful."

Deputy Petroleum Administrator Ralph K. Davies remarked to CALIFORNIA OIL WORLD'S representative that "I feel as though I had lost my right arm," when queried about Marshall's resignation. The San Franciscan was "much more than a lawyer" in his Washington job," Davies added.

While it might be like carrying oranges to California, a few words on Howard's background might not be inappropriate for a returning Son of the Golden State.

Actually, he is not a "born" Californian. He was born and raised in Germantown, Pennsylvania; attended the George School in that state and later studied at Haverford College, where he received a bachelor of arts degree in economics in 1926. In that year he joined the faculty of the fabulous "Floating University," which cruised around the globe with its students to give them first-hand knowledge of the world they were living in.

A year later Howard Marshall entered Yale Law School,—snaffling his LL.B. degree (magna cum laude) in 1931,—to be appointed assistant dean of the Yale Law School at a ridiculously youthful age (according to our experience with deans).

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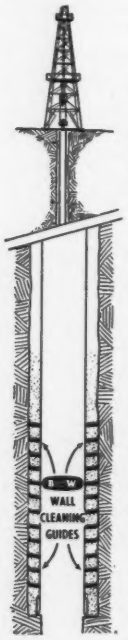

1 TO PREVENT BLOW-OUTS

Wall Cleaning Guides placed on the bottom joints of surface casing protect against blow-outs around the casing, or cratering from an imperfect cement job.

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The rotation and jarring of the drill pipe tends to loosen the threads of the bottom joint of surface casing, particularly opposite an imperfect cement job. The unscrewing of this joint may result in an impossible fishing job, or abandonment.

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9 5/8"	12 1/4"	14 1/2"
10 3/4"	14 3/4"	16 3/4"
13 3/8"	17 1/4"	18 1/2"

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Flipped into the bewildering NRA period while still fresh from the university, Howard managed to add a few impressive titles during his two-year stretch with the Government. He was a member of the Federal Tanker Board for the East Texas Oil Field; special assistant to the U. S. Attorney General, and special representative of the Secretary of the Interior on the Board of the Pacific Coast Petroleum Agency and the Central Committee of California oil producers, — from 1933 to 1935.

Fame and fortune in private industry began beckoning in 1935, when he was invited to become the "special legal and economic counsel" of Standard Oil Company of California, in San Francisco. He remained there two years, before joining Pillsbury, Madison and Sutro—becoming a partner in that firm in 1938.

All this was given up—under a leave of absence from his firm—when the then Office of Petroleum Coordinator (now PAW, of course) was established in 1941. And not without a sacrifice.

Howard could have had a lot of fun in Washington, if he had been the type who would forsake his responsibilities at the cocktail hours. But he wouldn't. So he is known by his Washington intimates as a hard-to-get guy who could be the salvation of any Washington party,—providing they caught him after his 7, or 8, or 9 p.m. "office hours."

Marshall's popularity is still ringing up and down the corridors of the New Interior Department Building (and they are long and many). His stories will be repeated for, at least, the next four administrations.

We think that California had better appreciate the Marshall return. Lawyers who can tell a good story; refrain from talking what Maury Maverick describes as "gobbledygook"; impartially advise both Government and industry, without getting their head chopped off by one, or the other, or both, are rare birds.

Loss of J. Howard Marshall to the PAW is largely cushioned by the fact Robert E. Hardwicks, Fort Worth attorney who is nationally known as one of the "leading oil attorneys" of the country is taking his place.

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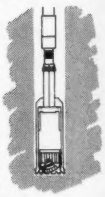
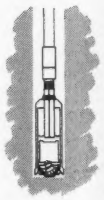


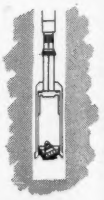
APPLY WEIGHT

Pressure shears the four four pins which prevent fingers from closing prematurely, forces the fingers through the die inside the shoe.



STEEL FINGERS SCRAPE BOTTOM

The steel strips curve and interlock as they are driven through the die, forming a tight basket that picks up and retains both big and little junk.



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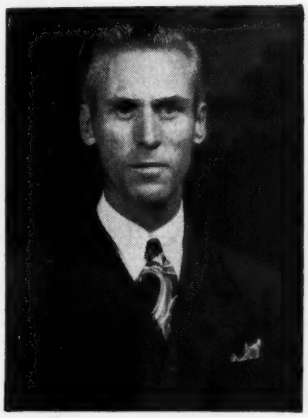
Two New Representatives For Oil Tool Division of Byron Jackson

Recently Byron Jackson, Los Angeles, appointed Joel B. "Buck" Buchanan to the Rocky Mountain territory for the oil tool division of the company with headquarters in Casper, Wyoming. Mr. Buchanan brings to the company the wealth of experience of twenty years practical oil field activity in the Mid-Continent and such foreign fields as Mexico and South America as a contractor, tool pusher and rig man. Before leaving Casper, Mr. Buchanan underwent an extensive training program on the entire line of BJ tools at the oil tool division.



Joel B. Buchanan

Lawrence M. "Larry" Coker has also joined the BJ oil tool division as export sales engineer and will handle foreign contacts on the Pacific Coast. Mr. Coker was formerly connected for a number of years with National Supply Company where he engaged in similar duties.

L. M. Coker

McLaughlin Succeeds Thomas

Appointment of Robb E. McLaughlin of Glendale, California, as District Counsel for the Pacific Coast (District 5) was announced on Sept. 4th by the Petroleum Administration for War. He succeeds Clyde Thomas.

A native of Illinois and a veteran of the last World War, Mr. McLaughlin received his Bachelor of Science degree from Northwestern University in 1921 and his Doctor of Jurisprudence degree in 1924.

Mr. McLaughlin came to California in 1926 to practice law in Los Angeles. In 1928, he became a member of the District Attorney's staff in Los Angeles, resigning that post the following year to enter the Los Angeles City Attorney's office.

In 1934, he was appointed by former California Attorney General Webb as a Deputy to handle the work of the Division of Oil and Gas, Department of Natural Resources, and of the State Lands Commission in Southern California. He served in that capacity under three Attorney Generals until he resigned to enter the service of the Federal Government.

Robb E. McLaughlin

Maurice A. Machris, vice-president of the Wilshire Oil Company, Inc., of Los Angeles, is pictured above discussing with W. D. Smith, public relations director of the Wilshire Company, (left) the relative merits of the poster being distributed to Wilshire dealers calling attention to the new radio program launched on the Columbia California network.

In commenting on Wilshire's new venture, Machris said: "As one of the companies engaged in the production of 100 octane gasoline for the Pacific war area, it is our intention to tell the public about the production miracles performed by all members of the petroleum industry. We also want the public the know something about how the new techniques developed in war time may play an important part in producing new types of post-war motor fuels. While I cannot predict what automobile engineers have up their sleeves in the way of new motor designs, it is safe to say that all refiners who have been producing 100 octane gasoline will be ready to give the public gasolines which will be exactly suitable for any motor design which may today be on the drafting table."

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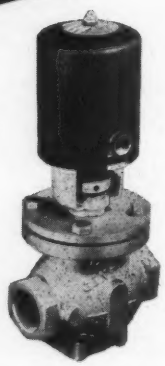

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Field Development

Los Angeles Basin

Seal Beach Drilling Continues

Development of the good oil production at Seal Beach continues at a uniform pace. Currently under way are two strings for the Capital Company and one each for Continental Oil Company, Hellman Estate Company, Shell Oil Company, Standard Oil Company, and Tide Water Associated Oil Company with none of the current strings immediately scheduled to complete. Additional work proposed is another grass-root job by Continental, a northerly outpost by Shell and a redrill by D. D. Dunlap and Sam Freeman in the southeasterly section of the Alamitos Heights Field Area.

Hathaway Quits

Hathaway Company Rossi No. 1 Section 22-2s-12w in the Bandini Area of Los Angeles County northwest of Santa Fe Springs is abandoning in Pliocene gray sand at 7831 ft. after the operators resolved not to look further for the objective Miocene horizon. Shallow gas shows were reported at 1600 ft. and 2200 ft. but were obviously not considered worth testing.

Hasley Canyon Try Yet Fishing

Shell Oil Company Shell-Claiborne No. 88-4 Section 4-4n-17w is fishing drill pipe after reaching 5743 ft. No showings have been reported prior to the stuck pipe.

Sunset Wildcat Continues Coring

Standard Oil Company Lomita Sunset Comm. No. 1 north of the highway at the easterly end of Sunset Beach was last reported coring questionable looking oil sand at 5165 ft. The well is reported to have found much sand section but according to usually reliable sources nothing of spectacular interest has thus far been encountered.

Huntington Beach Completions Continue

Southwest Exploration Company continues to reap a rich reward from its program in the State-owned offshore accumulation. Latest completed was State No. J-19 which finished at 3489 ft. pumping 352 bbls. daily clean 15.8 gravity oil. Currently under way is the Company's No. J-26.

In the northerly field area the Treasure Hill Oil Company Rex No. 12 cleaned out and deepened to 6134 ft. where a survey indicated an undesirable hole drift. Scheduled to go to 10,000 ft. the well plugged to 3600 ft. and fished 8⅝ inch from 3323 ft. to whipstock and redirect the hole in a more favorable position.

Long Beach Deep Test Delayed

Shell Oil Company Alamitos No. 48, projected Schist test in the easterly section of the Long Beach field, is reported preparing to redrill from the surface after once reaching 5678 ft. Consistently losing circulation after sticking and recovering drill pipe the well was found to have damaged surface casing.

Buena Park Cat Testing

General Petroleum Corp's. Heath No. 1, Section 34-3s-11w, in the Buena Park Area of Orange County is preparing to run liner for production trial after swabbing an average 125 B/D 27.7 gravity oil from the open interval 11,200 to 11,135 ft. Apparently assured of small production the Company is preparing to rig portable tools to re-enter the old 8935 ft. Harrison M. Tucker Well No. 1

LOS ANGELES BASIN WILDCATS

Area	Well	No.	Section	Depth	Status
Aliso Canyon	Standard Oil Co., Del Aliso	1	29, 3-16	7735	Drilling
	Standard Oil Co., Frew	1-3	29, 3-16		Rigging up
	Standard Oil Co., Ward	3-1	27, 3-16	4514	Drilling
Bandini	Hathaway Co., Rossi	1	22, 2-12	7831	Abandoning
Castaic	Charter Oil Co., Well	1	18, 5-16		Graded roads
El Segundo	Richfield Oil Corp., Leuzinger	1	8, 3-14	550	Drilling
Hasley Canyon	Shell Oil Co., Claiborne	88-4	4, 4-17	5743	Drilling
Las Llajas	Standard Oil Co., Brady Est.	2-1	13, 3-17	2461	Drilling
Newhall	British-Am. & The Texas Co., NLF	1	21, 4-17	2661	Drilling
	Standard Oil Co., N.L. & F.	3-2	19, 4-17		Rigging up
Pico Canyon	Standard Oil Co., Pico Co.	42	1, 3-17	1920	Drilling
Puente	Alleghany Pet. Co., Rowland	1	14, 2-10	890	Drilling
	Hacienda Oil Co., Well	1	27, 2-10		Location
	Hansen, Melvin, Corehole	3	24, 2-10	1900	Pumps water
Turnbull Canyon	Fowler Drilling Co., Saunders	1	13, 2-11	1618	Drilling
Whittier	Mayo Oil Co., Grey	1	17, 2-11	4360	Drilling
	Orange County				
Bolsa Chica	Standard Oil Co., Lomita-Sunset	1	29, 5-11	5165	Drilling
Brea Canyon	Selbar Oil Co., Wardman-Comm.	1	3, 3-10		Bldg. rig
Buena Park	Gen. Pet. Corp., Heath	1	34, 3-11	11422	Rng. liner
E. Coyote	Barnsdall Oil Co., Sunny Hills	2	22, 3-10	6307	Drilling
Olive	Richfield Oil Corp., Hamrick-Olive	1	8, 4-9	2906	Drilling
	San Bernardino County				
Chino Hills	Chino Hills Oil Co., Kraemer	2	33, 3-28		Prep. to spud
Hesperia	Salter, Lee, Well	1	34, 4-5	2900	Drilling
	San Diego County				
Waterman Cyn.	La Jolla Pet. Co., Well	1	32, 15-3	2773	Drilling

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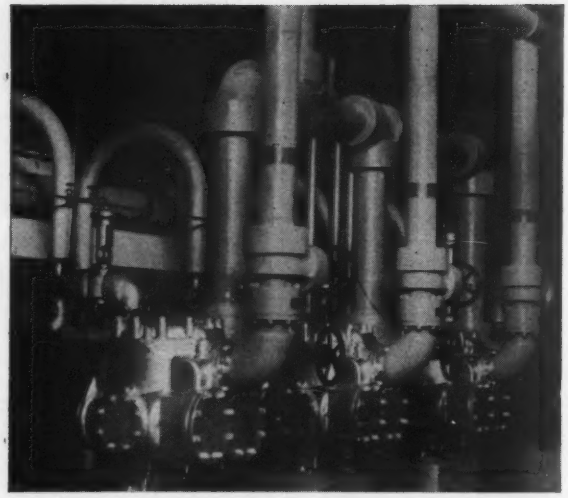

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in the same section. If possible, the old hole will be utilized for another try at the producing horizon encountered in the original Heath Well.

Selbar Starts Brea Wildcat

Selbar Oil Company is building rig for Wardman Comm. No. 1 approximately 1488 ft. south and 1119 ft. east of the north quarter corner of Section 3-3s-10w, about a mile west of the northerly tip of the Brea Canyon Field.

Montebello Deep Test Disappointing

Union Oil Company's Howard & Smith No. 3, at Beverly Blvd. and Maple Street, in the west Montebello Field, deepened to 10,722 ft. for disappointing trial on sands below the 8th zone. Recovery from perforations from 10,510 to 10,670 ft. was water with a little oil and gas with similar recovery from perforations at the 10,150 ft. 10,300 ft. and 10,400 ft. levels.

Wilmington Wells Remain Substantial

Long Beach Oil Development Company drilling in the Wilmington Field is regularly rewarded with solid production from the recognized fiedl zones. Latest compelted was the Company's "Y" No. 16, which finished at effective depth of 3595 ft. pumping 293 bbls. clean 18.1 gravity oil from the upper terminal zone. The Company has an average six strings at work with many occasions projected ahead of the drill.

Union Pacific Railroad Company likewise continues its large scale development in the southerly field sector. Latest to the tanks here was Well No. 246, at 2629 ft., pumping 175 bbls. daily and immediately followed by No. 248 which went on the beam at 2840 ft. for 159 B/D clean 17.8 gravity oil.

Olive Area Well Drilling

Richfield Oil Corp. Hamrick-Olive No. 1, Section 8-4s-9w, in the Olive Area of Orange County is spot coring at 2906 ft.

San Joaquin Valley

Edison Area Well Flows

On Sec. 3-30s-29e British American and Capital Co. Portals No. 53-3 is completing after bottoming in shale at 4768 ft. Oil sands were cored in the interval 4730 ft. to 4758 ft. which tested at a 1000 barrel per day rate oil and 5000 MCF gas. With 7-inch cemented at 4733 ft. the well flowed on production test a 260 B/D rate 37 gravity oil and 415 MCF gas through a ¾-inch bean. Located at the N E flank of the Edison Producing Pool the eminent discovery is the most significant of recent East Valley plays.

Yet farther to the east Richfield Oil Corp. has poured foundation for Cottonwood-Olcese No. 1 as a wildcat near the center of section 20-29s 30e.

Tejon Well Blows Out

Reserve Oil and Gas Company—Well No. 33-7, on Section 33-11n-19w bottomed at 2705 feet in oil sand and ran 7 inch to the top of the oil zone at 2610 feet. With the hole cleaned out 3 feet below the shoe the well indicated a moderate gas capacity. While pulling the tester, the well blew out with 13 stands of drill pipe and the packer remaining to come, and blew an estimated 10,000,000 cubic feet of gas. At press time the well had not been killed and was blowing a full 7-inch stream from the casing to the top of the portable derrick employed.

Seaboard Abandons Cantua Creek Wildcat

The Joint Seaboard Pure Oil Company try No. 54-22, on section 22-16s-13e in the Cantua Creek Area of Fresno County, is abandoned at 5035 feet. Tests of the interval above the plug failed when the hole caved thus prohibiting production trial. Formation tests of the 5060 to 5267 ft. interval had previously blown an estimated 1,000 MCF gas.

Strand Area Test Abandoned

Standard Oil Company Robbins Comm. 45-35, on section 35-29s-26e, is abandoned at 8600 ft. after tests of the main Stevens Zone below 6620 ft. recovered only salt water. The Company is under way with Borland Olney No. 67-35 on the same section at 7212 ft. and is drilling Brittain Trustee No. 61-2 at 9502 ft. on the adjacent section 2-30s-26e.

Buena Vista Hills Gets Good Completion

Standard Oil Company's program in the Buena Vista Hills is continuing with completions both solid and regular. Latest to the tanks were Nos. 325-27B and 331-1C which completed flowing a 500 odd barrel clean 32 plus gravity oil through small beans with a good gas oil ratio. Also recently finished, was North American Oil Consolidated Well No. 65 which completed at 4415 ft. on Section 28-31s-23e flowing 574 bbls. in 16 hours clean 29 gravity oil through a ½-inch bean.

SAN JOAQUIN VALLEY WILDCATS

Area	Well	No.	Section	Depth	Status
Fresno County					
Burrel	General Pet. Corp., Burrel	8-6	26, 16-18		Grade
	General Pet. Corp., Cryan	1-32	32, 16-19	7828	Drilling
Cantua	SeaBoard-Pure Oil Co., Well	54-22	22, 16-13	7016	Abandoned
	Tide Water Assoc. Oil Co., S.P.	82-15	15, 17-15		Location
Jacalitos	The Texas Co., Hawxhurst	1-6	6, 22-16	4255	Drilling
NW Raisin City	Seaboard Oil Co., Seaboard-Pure	5-5	5, 15-17		Grade
San Joaquin	Superior Oil Co., San Joaquin	88-32	32, 15-17	3870	Drilling
S. E. Helm	Amerada Pet. Corp., Calif. Lands	76-15	15, 17-18	7590	Drilling
Tranquility	Standard Oil Co., Patterson	74	3, 16-14		Location
	The Texas Co., Calif.-Cotton	36-23	23, 16-15		Cellar
Kern County					
Ant Hill	Amerada Pet. Corp., S. P.	35-15	15, 29-29	2220	Suspended
	Amerada Pet. Corp., S. P.	37-15	15, 29-29	255	Drilling
Canfield Ranch	Shell Oil Co., Inc., KCL-B	45-27	27, 30-26		Cellar
Devils Den	C.C.M.O. Co., Bates	2	20, 25-19	3125	Drilling
E. Edison	Richfield Oil Corp., Cottonwood-Olcese	1	20, 29-30		Foundation
Fruitvale	General Pet. Corp., KCL	76-29	29, 29-27	4159	Drilling
	General Pet. Corp., Kernlandia	84-16	16, 29-27		Rig
Gosford	T. W. A. Oil Co., KCL	66-22	22, 30-26	6714	Drilling
McKittrick	Americal Pet. Corp., Americal	1	2, 30-31	5450	Idle
	MacDonald-Burns & Norris, Flickinger	1	36, 30-22	5083	Drilling
	Richfield Oil Corp., Olig	3	12, 30-21	1350	Completing
	Standard Oil Co., McPhee	2-1	36, 29-21	4637	Drilling
Lindsey Hills	Standard Oil Co., Notz	1	18, 28-22		Rigging up
Lost Hills	Standard Oil Co., Cahn	58-4	4, 27-21		Foundation
Magunden	Western Gulf Oil Co., Cohn Est.	1	3, 30-28		Location
McClung	Continental Oil Co., KCL-G	2	4, 30-26		Rigging up
McVan	Butler Bros., Well	2	14, 27-27	430	Drilling
Poso Creek	Independent Expl. Co., Conoco	53	33, 27-27		Location
Round Mt.	Barnsdall Oil Co., Barlow	1	24, 28-28	2402	Abandoned
	Bender Drilling Co., Vedder	14-1	14, 28-28		Rigging up
	T. W. A. Oil Co., Olcese	1	27, 28-29		Rigging up
Semitropic	Standard Oil Co., Fullerton	1	25, 27-23	12542	Drilling
Shafter	T.W.A. Oil Co., Shafter Comm.	86-A7	7, 28-25	12375	Drilling
Sheep Springs	Rothschild-Bender, S. S.	2	17, 29-21	3463	Drilling
So. Belridge	Bandini Pet. Co., Bacon	1	27, 28-20	8846	Drilling
Strand	Standard Oil Co., Robbins	45-35	35, 29-26	8600	Abandoned
	Standard Oil Co., Borland-Olney	67-35	35, 29-26	7212	Drilling
	Standard Oil Co., Brittain	61-2	2, 30-26	9502	Drilling
	Superior Oil Co., Houghton	38-35	35, 29-26	6715	Drilling
Stockdale	W.G.O. Co., KCL	77-5	5, 30-27	11343	Drilling
Sunset	T. W. A. Co., McBean	86-36	36, 12-23	8208	Drilling
Tejon	Reserve Oil and Gas Co., Well	33-7	33, 11-19	2705	Prep. to test
	Richfield Oil Corp., S. P. 10	15-15	15, 11-19	6766	Drilling
Trico	Magee, H.H., Opr., Amal-Happold	2	15, 25-24	8595	Drilling
Kings County					
Alpaugh	Standard Oil Co., Cutter	1	29, 23-22	3630	Completed
Pyramid Hills	Standard Oil Co., Well	1-6	21, 24-18	3094	Drilling
Madera County					
Gill Ranch	The Texas Co., Gill	525-17	17, 13-16		Location
Herminghaus	Shell Oil Co., Edison-Securities	25	22, 13-16		Grade
San Luis Obispo County					
Midway	C.C.M.O. Co., Well	G-3	2, 32-22	2552	Drilling
	Richfield Oil Corp., Temblor Hills	1-1	36, 31-21	5213	Drilling
Tulare County					
Ducor	Tannehill, L. B. & Assoc., Hunsaker	1	17, 23-27		Rigging up

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Elk Hills Field Work Continues

Standard Oil Company, Operator for the U. S. Navy Petroleum Reserve No. 1, in the Elk Hills Field of Kern County, is continuing to subcontract on an intensive program designed ultimately to accomplish 300 new producers. With contracts currently being let to some of the larger drilling contracting concerns, the development is reaching an increasingly rapid pace. Well production in this field varies from 350 to 600 bbls. per day of 22 to 23 gravity clean oil of a character greatly desired under present conditions.

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Alpaugh Well Completed

Standard Oil Company Cutter No. 1 Section 29-23s-22e completed at effective depth of 3510 ft. from 20 ft. of zone flowing a maximum 14,388 MCF rate gas through a 56/64-inch Bean and shut in under 1425 pounds equalized pressure. The well made rates through smaller beans ranging down to 7616 MCF through a 25/64 inch Bean prior to shutting in pending demand.

Dixon Gasser Now Finished

Amerada Pet. Corp., Starkey Fee No. 1 on Section 2-6n-2e in the Dixon Area of Solano County was completed in the Eocene interval 4550 to 4600 ft. flowing 22,570 MCF gas through a 56/64 inch Bean before shutting in under 1860 pound pressure. The well was drilled in the early part of 1943 and suspended at 9434 ft. until the current successful testing program.

Union Testing "Y" Zone Sands

Union Oil Company deepened Belridge No. 19 on Section 36-27s-20e from 8360 ft. to 8904 ft. and found the "Y" Zone well saturated at 8770 ft. At last report the well was preparing to complete from the perforated interval 8415 to 77 and 8775 to 8825 ft.

In the same field Belridge Oil Company is preparing to drill well 1-Y-28 while The Texas Company will drill J. D. Martin No. 5 and Tide Water Associated will drill Well No. 102 to the same zone.

Kirby Hills Try Blows Between Strings

Shell Oil Co. Lambie No. 1, Section 25-4n-1w at the north flank of Suisan Bay in Solano County blew in between strings at an estimated 5,000 MCF rate gas and is currently standing plugged with cement pending production trial. Bottomed at 2617 ft. and with 8⅝ inch cemented at 540 ft., the well blew while running 5½ inch casing for production trial.

Lytle Completes Pleasant Valley Well

R. S. Lytle, Operator, completed well No. 33-28F on section 28-20s-16e in the Pleasant Valley Field of Fresno County. Bottomed in oil sand at 9210 ft. the well initialed 635 B/D 28.5 gravity oil and 482 MCF gas through a 16/64-inch bean. On Section 21 of the field Standard Oil Company, Pleasant Valley Farms No. 37-21F, completed at plugged depth of 9180 ft. flowing 834 bbls. clean 28.3 gravity oil and half million cubic feet of gas through a 16/64-inch Bean. Each Company is under way with subsequent development of this rich Eocene production.

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Whittier Associates Testing Purisima Well

Whittier Associates Barham No. 2 Section 11-7n-32w in the Purisima Hills Area of Santa Barbara County is testing water shut off after deepening to 3726 ft. and plugging to 3600 ft. where pump recovery was wet. Plugged to approximately 3300 ft. the well will test formations encountered below the original depth of 2724 ft. where a small amount of oil was recovered.

Arroyo Grande Well Testing

Wm. C. McDuffie, Adams No. 1, Section 31-31s-13e, bottomed at 3832 ft. and plugged to 1069 ft. where a combination string of 9 inchs including 55 ft. perforation was landed and coupled at 1015 ft. for tests of the upper sand phase.

Sespe Well Now Spudded

Merchants Petroleum Corp. again seeks production on Sec. 1-4n-20w with Well No. 9 currently drilling below 100 ft. in the northeast corner of the section. In the far north Sespe Area in Section 5-5n-19w Associated Piping and Engineering Company Well No. 1 is moving in equipment for a wildcat try.

Cat Canyon Try Swabs Oil

Pacific Western Oil Corp. Los Alamos No. 21, Section 36-9n-33w, was last reported swabbing all oil on an open hole test from the shoe of 7 inch at 5150 ft. to bottom at 5690 ft. The Company has rig up for Well No. 27 on the adjacent Section 1-8n-33w.

Union Oil Company is resuming development of its Palmer-Stendel holdings with No. B-1 first scheduled on Section 26-9n-33w to be followed by No. A-1 on Section 29-9n-32w.

Goleta Gas Test Directional Drilling

Pacific Lighting Corp. Miller No. 1, a Vaqueros Zone test on Mascalitan Island—Section 20-4n-28w—is directionally drilling at 3861 ft. in search of the gas production normally expected at this point.

Los Alamos Try Redrilling

J. I. Anderson and Southern California Pet. Corp. are redrilling Archambeault No. 2 at 4765 ft. after once bottoming the Miocene shale at 4770 ft. and sticking drill pipe.

Two Complete at Ventura

Two completions were effected in the Ventura Avenue Field during the week—first to the tanks was Shell Oil Company's redrilled Edison No. 42, which completed at 11,231 ft. for 442 bbls. in 22 hours clean 31.6 gravity oil through a 14/64 inch bean, with 350 MCF gas. Tide Water Associated finished Hartman No. 30 at 11,150 ft. flowing 1413 B/22 hours 27.5 gravity oil and 1407 MCF rate gas through a 30/64 inch bean. Each Company has multiple drilling jobs under way in this field while British American and Lloyd Corp. are each operating one string.

Oxnard Deep Test Scheduled

Lloyd Corp. Ltd. is preparing to drill Todd A-1 on Section 6-1n-22w, on Wolf Road in the Oxnard heavy oil producing area. The well is scheduled to prospect below anything yet produced in this section of the county.

Bardsdale Driller Yet Continues

Wilshire Oil Co. C. E. Dryden No. 1, 7-3n-19w at Bardsdale was last reported spot coring shale at 4170 ft. after tests of the oil sand interval 1808-1947 ft. were mechani-

COASTAL COUNTIES WILDCATS

Area	Well	No.	Section	Depth	Status
	Santa Barbara County				
Cat Canyon	Richfield Oil Corp., Los Flores	1	10, 8-33	7147	Drilling
	Union Oil Co., McNee, C. H.	3	20, 9-32	4500	Testing
	Union Oil Co., Santa Maria Realty	1	10, 9-33		Foundation
Gaviota	Standard Oil Co., Hollister	1	35, 5-33		Rig
Lompoc	S. R. Williams, Fickert	1	8, 7-33	3446	Idle
Los Alamos	J. I. Anderson & So. Calif. Pet. Corp., Archambeault	2	3, 7-32	4770	Redrilling
Los Olivos	Hub Oil Co., La Laguna	1	7, 7-30	3580	Cleaning out
Purisima	Whittier Assoc., Barham	2	11, 7-32	3726	Testing
	Ventura County				
Ex-Mission	Union Oil Co., Adams	41	19, 4-21	3061	Bailing
Happy Camp	Cal-Camp Oil Corp., Harrington	1	21, 3-19		Grade roads
Oxnard	Lloyd Corp., Ltd., Todd	A-1	6, 1-22		Grade
Piru	Standard Oil Co., Bowman	2-1	14, 4-18	7988	Abandoned
Sespe	Assoc. Pip. & Eng. Co., A.P.&E. Co.	1	5, 5-19		Rigging up
	Volunteer Pet. Co., Tar Creek	3	28, 5-19	2367	Reaming
	Merchants Pet. Co., Well	9	1, 4-20	83	Drilling
South Mt.	Los Nietos Co., L.B.H.	1	22, 3-21	1098	Drilling
	Pac. West. O. Corp., Yale-Richardson	1	13, 3-21	4025	Completed
	Pac. West. O. Corp., Yale-Richardson	2	13, 3-21		Rigging up
	Wilshire Oil Co., Petit	2	16, 3-20		Rig
Timber Canyon	Hickey, Noble J. Temple	1	22, 4-21	693	Idle
	San Luis Obispo County				
Arroyo Grande	McDuffie, Wm. C. Adams	1	31, 31-13	3832	Bailing

NORTHERN COUNTIES WILDCATS

County	Well	No.	Section	Depth	Status
Butte	Pacific Western & Getty Greenlee	1	25, 19n-2e	510	Drilling
	Richfield Oil Corp., Hamilton-Nord	1	9, 22n-1w	4439	Drilling
Colusa	Standard Oil Co., Davis	1	36, 18n-2w		Location
Contra Costa	Shell Oil Co., Inc., Jacuzzi	1	34, 2n-2e		Location
Glenn	Standard Oil Co., Torres	1	12, 18n-2w	2110	Drilling
San Benito	Panoche Pet. Co., Panoche	1	24, 16s-10e	843	Drilling
San Mateo	Richfield Oil Corp., Lena Souza	1	13, 7s-5w	5211	Reaming
Solano	Amerada Pet. Corp., Sorensen	1	19, 6n-3e		Rigging up
	Shell Oil Co., Inc., Lambie	1	25, 4n-1w	2617	Killed—Blow-out
	Standard Oil Co., Suisun	3	5, 3n-1w	5594	Drilling
	Standard Oil Co., Suisun	4	5, 3n-1w	3570	Drilling
	Standard Oil Co., Fontana	1	23, 3n-1w	7780	Drilling
	Standard Oil Co., Fontana	2	32, 4n-1w	1100	Drilling
Tehama	Superior Oil Co., Saldubehere	1	12, 24s-3w	8405	Drilling
	The Texas Co., Jelly-Bend	18-8	8, 29n-2w	2500	Drilling
Yolo	The Texas Co., Winchester	8-1	4, 6n-4e		Location

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cal failures. Above this zone 300 ft. of sands were reported in the 1200-1800 ft. interval. Regardless of discovery at greater depth, cores indicate substantial potential production from zones already taken. On the same Section, San Marino Oil Company is setting boilers in preparation for Capital Crude No. 2.

BUY WAR BONDS

Padre Canyon Well Completed

C. C. M. O. Co. completed Oak Grove No. 1, Section 23-3n-24w, at 7411 ft. flowing 907 bbls. of oil through a ½ inch bean. Finished from perforations at intervals from 6590 to 7330 ft. the well was reported making 835 bbls. daily clean 31 gravity oil and 105 MCF gas. In the same field the Company's Hobson No. A-14 was last reported drilling shale at 4100 ft.

Santa Maria Well Flows

Bel-Air Oil Company Tonascia No. 2 completed in Franciscan at 4654 ft. flowing 327 bbls. of 15.8 gravity oil and 1185 MCF gas through a ½ inch bean. The Company is redrilling Twitchell No. 5, Section 35-10n-34w, at 4777 ft. after once reaching 4999 ft. and sticking drill pipe. Next effort for the Company will be Northman No. 1 on the same section.

On Section 24 of the township, Union Oil Company Adams No. 5 completed on the pump from 3578 ft. for 362 B/D 15.5 gravity 2%. Union is continuing the intensive drilling program which has long characterized its operations in this field.

Hickey Deepens Timber Canyon Well

Noble J. Hickey has acquired the old Hardison & Temple Well No. 1 on Sec. 22-4n-21w and is deepening from old bottom at 656 ft.

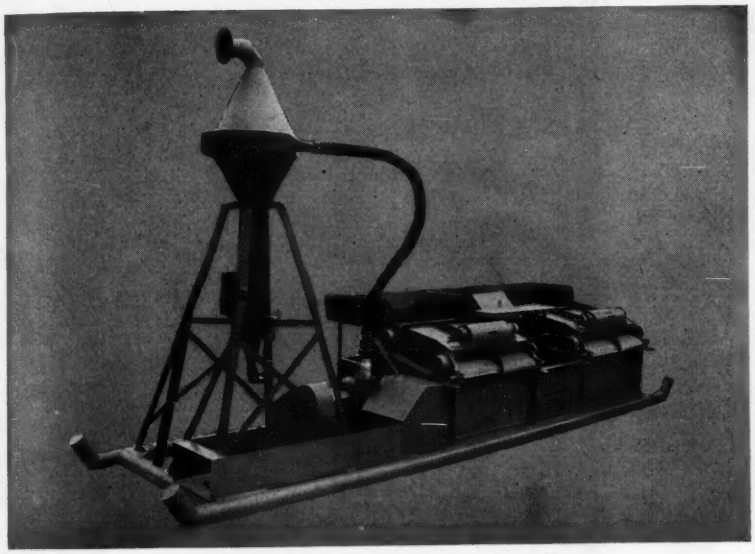
Hub to Deepen Los Olivos Try

Hub Oil Company is cleaning out to deepen La Laguna No. 1 on Section 7-7n-30w in the Los Olivos Area of Santa Barbara County. The well was originally bottomed at 3580 ft. in siltstone.

South Mountain Well Completed

Pacific Western Oil Corporation completed Yale Richardson No. 1 on Section 13-3n-21w at the South Mountain Field pumping 160 bbls. of 15.5 gravity oil from perforations at intervals from 1640 ft. to bottom at 4025 ft. The Company will immediately drill Wells No. 2 and 3 on the same lease.

F. E. Fairfield is grading roads for South Mountain No. 2 at a point 309 ft. north and 935 ft. east of the northwest corner of Section 19-3n-20w in search of the substantial production accomplished in his Outpost Well No. 1.



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The types of Baker Rotary WALL Scraper and Baker Rotary CASING Scraper which are performing these operations so successfully in 1944 will be improved for use in your 1954 wells—but just in case you want to "work over that working surface" now, you can get prompt action from the Baker office nearest you.

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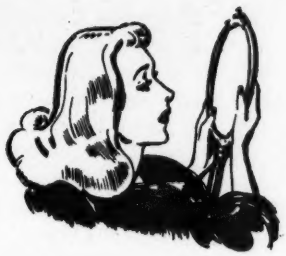

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East Valley Work Progresses

The consistent drilling program inaugurated in the East San Joaquin Fields with the advent of critical California production shortages is continuing in the older fields of the eastern San Joaquin Valley. Currently at work in the Kern Front Field are General Petroleum Corp., Standard Oil Company, Carrec Oil Company and Westates Pet. Corp. In the Kern River Field Tide Water Associated Oil Company, Kern Canyon Oil Company, Rio Kern Oil Company, Ray Frampton, and D & D Oil Company, continue their projected programs.

Midway-Sunset Well Completed

In the midst of old Midway-Sunset Field production Hilo Oil Company completed its St. Lawrence No. 1 on Sec. 5-32s-23e at 3550 ft. With 20 ft. of zone open the well made 280 bbls. daily clean 19.6 gravity oil. The Company is under way with Well No. 2 on an adjacent location and was last reported drilling shale at 1850 ft.

Midway Well Blows Out

C. C. M. O. Co. Well No. 78-9, Section 9-32s-23e bottomed in shale at 2500 ft. and cemented 6⅝-inch combination liner at 2120 ft. While pulling pipe after a successful water shut-off test, the well blew out for an estimated maximum 2000 MCF per day with a spray of oil variously rated at 60 bbls. daily. Killed with water and tubed at 2100 ft., the well was last reported swabbing for controlled production.

Belridge Resumes Field Development

Belridge Oil Company has resumed work in the South Belridge Field of Kern County. After a lapse of several weeks in a consistent drilling program the Company is again at work with four strings developing the shallow sands which have proved highly productive over a period of many years. Also active in this field is General Petroleum Corp. which is drilling up its holdings on and around Section 12-29s-21e.

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•

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Superior Continues Cymric Field Drilling

Superior Oil Company, which discovered production in the Cymric Area of Kern County, continues to develop its holdings on Section 22- and 23-29s-21e. Latest to the tanks was F & W 5 which initialed 60 bbls. clean 13 gravity oil from 1475 ft. and Weston No. 9 which made 75 bbls. daily similar oil from comparable depth.

Superior Deep Test Continues

Superior Oil Company Saldubehere No. 1 on Sec. 12-24n-3w in the Corning Area of Tohama County continues to drill at 8405 ft. No information has been available concerning findings at depths, however, field reports indicate that the well flowed an estimated 10,000 MCF gas at approximately 4070 ft. after finding two shallower sands, the capacity of which were not indicated.

Capital Company Yet Drilling

Capital Company continues development of its acreage on Section 11-2s-11w in the Turnbull Canyon Area of Los Angeles County. Latest completed was No. 2-2 which finished at 1990 ft. pumping 20 bbls. daily clean 20.5 gravity oil. The Company's 2-3 is nearing the productive horizon at 1859 ft.

Super High-Octane Gasoline Soon To Be Manufactured in United States

A recent PIWC announcement reveals that 80 percent of the U. S. high-octane manufacturing capacity is set to begin the production of a supergasoline with an octane value considerably over 100. A substantial volume will go to military needs during the last quarter of the year.

U. S. Big Investor in Raw and Synthetic Rubbers

The United States has spent 700 million dollars in establishing the synthetic rubber industry. Thirty-five million dollars have been spent on natural rubber properties in the Far East.

THIS LAUGH OFF!!

The glance that over cocktails seems so sweet may be less charming over shredded wheat.

Judge: "To aid you in understanding cubic feet, let us assume this inkstand to be three feet across the top this way and three feet that way and three feet in height. What would you call it?"

Witness: "I'd say it was a hell of a big inkstand."

The two young married women were talking seriously over the affairs of married life.

"I'm very much concerned lately," said one of them, "about the way my husband is treating me. Gradually he has been getting lax in his attentions, stays down town for dinner quite frequently, leaving me home alone, and sometimes comes home late at night with very slim excuses. I don't like it at all."

"I went through that same experience," said the other, "but I soon broke it up."

"How?" asked the first.

"Well, I waited until he came in very late one night, and as he came quietly up the stairs I called out, 'Is that you, Charley?' And that broke him of staying out nights."

"My goodness," said the other, "how did that break it up?"

"My husband's name is John," said the first.

An Insurance Adjuster: "But, my dear man, the fact that her father came home unexpectedly doesn't make it an accident."

A British officer was arguing with an American officer as to which army had the better discipline.

As the American was talking, one of his men came in.

"Cap," said the private, "can I have your jeep tonight? I've got to take out my girl."

"Sure," replied the ocer. Then, turning to the Briton, he said: "There's a proof of our discipline. He needn't have asked me."

"The only difference between you and a horse is that a horse wears a collar."

"But I wear a collar, too."

"Then I'm wrong. There's no difference!"

You never can tell—maybe a fish goes home and lies about the size of bait he stole.

During the war between the states the Union soldiers had captured three Confederates and were holding them as prisoners in a small stockade. One prisoner in particular was always kidding the guards about the licking the Yanks had taken at Chickamauga, until they could stand it no longer and reported him to General Grant.

Grant told him he would have to stop ribbing or he would either be sent to a concentration camp, or be made to take an oath of allegiance to the Union.

After some study he decided to take the oath and after being sworn he remarked to Grant, "Say, General, they sure whipped hell out of us at Chickamauga, didn't they?"

When Bidu Sayao, Brazilian singer, came to New York to sign an opera contract, an American impressario all but had her signature on the contract. He was thwarted, however, by Mamma Sayao, who kept whispering into Bidu's ear. The star consistently shook her head. The producer reluctantly raised his offer. Again Mamma, who spoke no English, whispered urgently. The American jumped his price again until his limit was reached.

"Miss Sayao," he sputtered, "that is my best offer. I simply can't go higher. You sign at this figure or the contract is off."

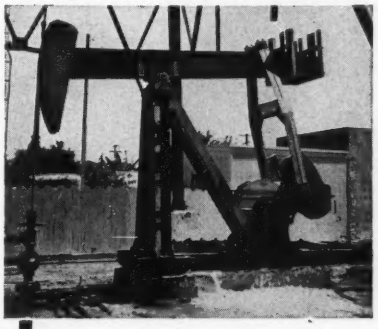
"But certainly," Bidu smiled. "Of course I sign."

Again Mamma plucked at her sleeve. Bidu blushed and stammered, "My mother wants to know, please—where is the ladies' room?"

"They tell me Jones has a good voice. Does he cultivate it?"

"I don't know about the cultivating, but I know he irrigates it."

A wedding ring is like a tourniquet; it stops your circulation.



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Brown and Miller Advanced by Standard

Mervin T. Miller has been appointed senior oil and gas coordinator for Standard of California's Producing Department, to succeed R. I. Brown, who became Standard's field superintendent for Producing Department operations in the San Francisco Bay district.

R. I. BROWN

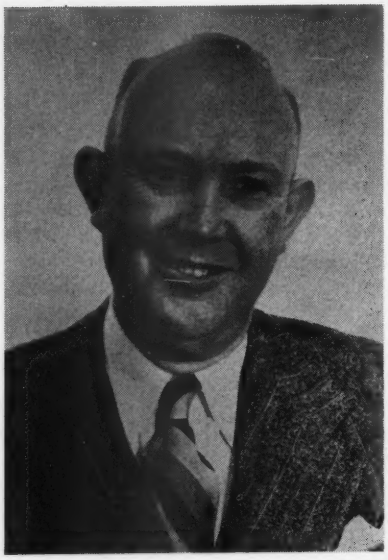
Brown was graduated with the University of California class in 1924 as a petroleum engineer and joined Standard's producing department at Taft in the same year. Four years later he became senior petroleum engineer at Coalinga and in 1932 he was made district petroleum engineer for the San Joaquin Valley. He took over as senior oil and gas coordinator in 1936. His headquarters as Bay district field superintendent will be at Rio Vista.

Miller was graduated from Stanford University as a petroleum engineer in 1930. His first job with Standard was in 1933 in Kettleman Hills. Subsequently, he served two and a half years handling proration matters in the petroleum engineering office at Taft. His next job was as oil and gas coordinator for the San Joaquin Valley, and for the last year he has been assistant production foreman for the San Joaquin Valley. His headquarters as senior coordinator will be in Los Angeles.

The appointments of both men were effective September 1, 1944.

F. H. SMITH

(Recently appointed as Assistant General Manager of Standard Oil Company of California's Manufacturing Dept.)



RICHARD K. ROWELL

(Advanced by Standard Oil Company of California to position of Manager of the Richmond Refinery.)

New Members Elected by Gasoline Assn.

Vernon A. Peterson, The Elliott Company; and George F. Schemel, Turco Products Company, have been accepted as members of the California Natural Gasoline Association.

BUY WAR BONDS

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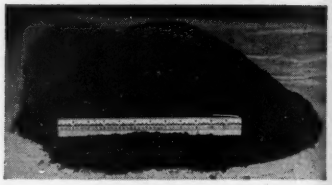
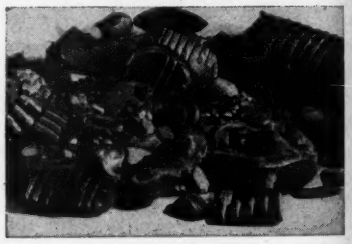
when you're fishing for . . .



MILLINGS



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